STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P.O. BOX 621
HONOLULU, HAWAII 96809

STAFF SUBMITTAL

for the meeting of the
COMMISSION ON WATER RESOURCE MANAGEMENT

August 17, 2015
Kona, Hawaii

Public Testimony and Argument on the Petition for Declaratory Relief filed by the Kaloko-Honokōhau National Historical Park (NPS) Regarding the Petition for Declaratory Orders on the Applicability of Hawaii Revised Statues §174C-3 & §174C-41 to the Basal, One or more Ahupua'a, or Some Combination of these Smaller Areas within the Hydrologic Unit of the Keauhou Aquifer System Area, Kona, Hawaii

SUMMARY OF REQUEST

Staff requests that the Commission on Water Resource Management (Commission) process the subject petition pursuant to Hawaii Revised Statutes (HRS) Chapter 92 (Hawaii's Sunshine Law), instead of conducting an HRS Chapter 91 proceeding for declaratory rulings as provided for under the State Water Code. This would provide for public notice and further public testimony for the presentation of evidence, but allow for Commission deliberation under HRS Chapter 91 after taking public testimony.

Further, staff recommends that the Commission find that consideration that smaller areas within the hydrologic unit of Keauhou Aquifer System Area (KASA), as defined in the current 2008 Water Resource Protection Plan (WRPP), do not meet the management strategies as set forth in the WRPP.

LOCATION: Keauhou Aquifer System Area (KASA) (Exhibit 1).

BACKGROUND:

On March 25, 2015, NPS submitted a Petition for Declaratory Order with the Commission to obtain a declaratory ruling on the concept of designating an area smaller than the KASA hydrologic unit as a ground water management area. The petition is attached as Exhibit 2.

On May 7, 2015, the U.S. Geological Survey (USGS) sent a letter to NPS regarding estimated ground water recharges to the ahupua'a in the KASA. A copy is attached as Exhibit 3.

On May 20, 2015, the Commission held a public meeting in Keauhou, Kona primarily to receive updates to Preliminary Order HA-WMA 2013-1 on the NPS petition to designate the KASA as a ground water management area. Much of the testimony submitted references the NPS petition for declaratory order even though it was not on the agenda. See Exhibit 4.

ANALYSIS/ISSUES:

Petition Summary

The petition seeks to have the Commission rule whether an 'area' as defined by the State Water Code, Hawaii Revised Statues (HRS) §§174C-3 & 41 for purposes of water management designation, can be:

1) The basal (coastal freshwater-lens) groundwater system within the KASA;
2) One or more ahupua'a (historic land divisions) within the KASA, and;
3) Some combination of 1) & 2).

NPS further states that a CWRM decision is necessary for negotiations with the county to meet the December 29, 2104 Preliminary Order HA-WMA 2013-1 C.5, which is regarding alternative paths other than designation.

May 20, 2015 Testimony

Testimony submitted regarding the petition for declaratory order requested that the public be allowed to testify on the petition. Of particular note is testimony from Carlsmith Ball LLP to which, at the May 20, 2015 meeting, then Commissioner Antolini encouraged NPS to respond. To date, NPS has not responded to the Commission on that testimony.

Consistency with the Hawaii Water Plan (HWP)

The 2008 Water Resource Protection Plan (WRPP) is one component of the HWP that documents and sets forth the Commission's water management strategies and policies for Hawaii. Together with the Water Quality Plan (WQP), State Water Projects Plan (SWPP), Agricultural Water Use and Development Plan (AWUDP), and the County Water Use and Development Plans (WUDPs), it provides the overall guidance and direction for managing Hawaii's water resources.

A major component of the WRPP is the hydrologic unit system approach for inventorying all wells, diversions, their use, and the nature, occurrence, and availability of surface and ground water statewide. Within the context of the WRPP these hydrologic units are described in the State Water Code, HRS §174C-31(2):

> *"Hydrologic units and their characteristics, including the quantity and quality of available resource, requirements for beneficial instream uses and environmental protection, desirable uses worthy of preservation by permit, and undesirable uses for which permits may be denied;*

These hydrologic units are established and used in the WRPP and constitute the framework upon which sustainability of the public trust water resource itself is based at an appropriate scale that makes use of the best geological, hydrological, and topographical information available. The hydrologic unit management approach is described in more detail in Chapter 3 of the 2008 WRPP.

Hydrologic units are further defined in the HRS §174C-3:

> *"Hydrologic unit" means a surface drainage area or a ground water basin or a combination of the two.*

The process for adopting the WRPP is provided for under HRS §174C-31 & §174C-32, where statewide public hearings on all islands and coordination with other agencies are required in its adoption of the hydrologic unit approach.

To help understand the complexities of the hydrologic unit framework approach in the following sections of this submittal, Exhibits 5a-b show an overlay of the surface & ground water hydrologic units, as defined in the 2008 WRPP, and ahupua'a, as defined in by the Office of Hawaiian Affairs 2009, within the KASA. In general, ground water hydrologic units are based on the physical geologic framework, hydraulic properties and boundary conditions initially observed in ground water levels, recharge/discharge rates, and water-quality conditions. The KASA boundaries follow the coastline to the west, Hualalai rift zone trending north-west to south-west on the north, and the surface contacts between Haulalai and Mauna Loa (Kau) lava flows as originally adopted by the Commission on June 27, 1990 - *Hawaii Water Plan: Water Resources Protection Plan, Volumes I & II (Mink & Yuen, 1990)*. It should be noted that this aquifer system boundary is consistent with the aquifer system boundary identified by the State of Hawaii Department of Health in GIS layers (http://planning.hawaii.gov/gis/download-gis-dataD created from maps prepared by John F. Mink and L.Stephen Lau (Water Resources Research Center) for the Department and Technical Report No. 191 (1993) cited in the petition; however, the smaller aquifer types areas therein are used for quality and contamination issues rather than natural sustainability quantity. .Surface water hydrologic units are somewhat more complex and are based upon the review of *Hawaii Stream Assessment* (1990), *State Definition and Delineation of Watersheds* (1994), and *Refinement of Hawaii Watershed Delineations* (1999). The review culminated in the Commission's adoption on June 15, 2005 of the *Surface-Water Hydrologic Units: A Management Tool for Instream Flow Standards PR-2005-01* (2005). It should be noted that theWRPP Honokohau Surface-Water Hydrologic Unit splits the NPS area in half.

Designating the basal area of the KASA Only

Exhibits 6 and 7 provide the current conceptual understanding of ground water bodies present in the KASA from the areal and profile views, respectively. Blue wells are mauka of the high-level divide in Exhibits 6 and 7, while red wells makai of the high-level divide are basal. From the best information to date, the high-level contributes some portion to the basal and possibly more from the perched high-level rather than deeper high-level. Also, some of the deeper high-level water makes its way into the deeper confined freshwater beneath the coastal basal and saltwater bodies. The exact ratios of the high-level contribution to these downgradient water bodies are the subject of more study and analysis. However, if the KASA is treated as a whole rather than discrete parts within the area, the hydrologic unit approach should suffice to manage its integrated parts within the context of current sustainable yield estimates. All ground water withdrawals from any of these ground water bodies within the KASA would count against sustainable yield.

Managing the basal only & separately does not make geologic or hydrologic sense given the interrelationship of the ground water bodies and the present land uses (i.e. lack of significant return irrigation). There is an analogy with the Ewa-Caprock where the Commission decided on May 14, 1997 to manage the overlying caprock separately from the underlying Pearl Harbor basal aquifer due to these geologic differences and major changes in return irrigation. However, instead of sustainable yield withdrawal limits, pumpage is subject to chloride limits (i.e. 1000 mg/l for the purposes of protecting the utility of the aquifer for irrigation needs). However, the mauka ASA portions of Pearl Harbor Aquifer Sector Area are also designated as a ground water management areas that have a relationship to the chloride concentrations in the Ewa-Caprock.

Therefore, it does not make hydrologic management sense to designate only the basal portion of the KASA because it loses the known connections and flow from the high-level portions resource.

Designating ground water by Ahupua‘a within the KASA

The hydrologic unit definition does not specifically identify ahupua‘a although it is an ‘area’. Ahupua‘a are based on other factors besides hydrologic considerations but they are more closely related to watershed and surface drainage area behavior than ground water basin behavior. Under HRS §174C-3, the anchialine ponds qualify as natural springs, which is defined as surface water. With the exception of the NPS anchialine ponds, there are no surface water features in the Honokohau Surface Water Hydrologic Unit. Within the KASA, there are only a few intermittent streams to the south in the Waiaha Surface Water Hydrologic Unit that flow during heavy rainfall (See Exhibit 5a).

Using the ahupua‘a for an ‘area’ makes a bit more sense than the basal only ‘area’ option citied in the petition for management purposes. The ahupua‘a’s general mauka-makai shape includes mauka high-level portions that have some impact on the basal portions of the KASA. The basal only ‘area’ ignores this reality.

However, it is the width of the ahupua‘a that does not correspond with the ground water behavior in the KASA. The ahupua‘a are generally less than a mile in width in the north-south direction. Given the high permeability in the north-south direction of the aquifers in the young volcanic formations outside of the barrier between the basal and high-level portions of the aquifer, it would be unreasonable to anticipate ground water remaining just within the individual scale of ahupua‘a boundaries. This is would be true just based on natural stresses of tidal and localized recharge patterns on ground water flow alone not even counting stresses induced by pumpage. Pumpage patterns within the basal portions makai and high-level portions mauka in the KASA would significantly affect and change ground water flow across the widths of the surface water based ahupua‘a areas.

Therefore, it does not make hydrologic management sense to designate ground water at the scale of the ahupua‘a in the KASA because the scale of this arguably more surface water based area does not match the geologic and hydrologic observations and scale known to affect ground water flow in the current hydrologic unit.

Designating by some combination of basal and Ahupua’a within the KASA

Though §174C-3 allows for some combination of ground and surface hydrologic units, no surface or ground water hydrologic units have ever been combined into one management area. The Na Wai Eha Surface Water Management Area and Iao Aquifer System Ground Water Management Area coexist separately in a functional manner and there has been no proposal to do otherwise. The closest case resembling a combination of ground and surface water management is the Waiahole Ditch System, though, to date, the boundaries and impacts on the related designated ground water management areas and non-designated surface water system areas is not clear.

Adding ahupua‘a boundaries that do not coincide well within the current WRPP hydrologic framework makes matters more difficult. It appears that only one (1) ahupua‘a lies completely within both the KASA and the Honokohau Surface Water System hydrologic units, while five (5) others are partially within both of the same units. This complexity is ostensibly due to differences in scale, purpose, and criteria used in setting boundaries for each of these three layers. If there is a desire to use the ahupua‘a boundaries, then there also needs to be a reconciliation between the current surface and ground water hydrologic units.

The reconciliation for surface water hydrologic units alone is a complex issue within the KASA. The U.S Department of Agriculture Natural Resources Conservation Council (NRCS) sets the nationally accepted Hydrologic Unit Codes (HUC-12 in the KASA) while the state is responsible for more detailed levels

(HUC-14 to 16). Exhibit 8 shows a sample view of more detailed layers superimposed on Exhibit 5b (WRPP ground and surface water hydrologic units and ahupua‘a). The complexity and inconsistencies between just these two sample surface water basin layers of information is self-evident. The most current version of the Atlas of Hawaiian Watersheds & Their Aquatic Resources for Kona (http://www.hawaiiwatershedatlas.com/ha_kona.html) developed by Department of Land and Natural Resources (DLNR) Division of Aquatic Resources (DAR) define a more refined perspective of surface basins. The full NRCS HUC-12 level is also shown. Other potential surface basins not shown but worth mentioning can come from USGS Stream Stats (http://water.usgs.gov/osw/streamstats/) and the State Office of Planning Watershed Layer (http://planning.hawaii.gov/gis/download-gis-data/ (See 012-Inland Water Resources > Watersheds) It is difficult by the very nature of Keauhou to assess surface drainage areas primarily because the scale and lack of clear topographical boundaries in an area where the island is so geologically young (See Exhibit 9).

At the scale appropriate for ground water management, smaller surface water drainage areas make little sense in the KASA. Due to its closer relationship to surface water drainage basins ahupua‘a would likewise make little sense to define ground water management areas.

Implications of Designating an Area Smaller than a 2008 WRPP Hydrologic Unit

Many years of effort has gone into using a consistent method and the best information available for updating both ground and surface water hydrologic units in the WRPP. For ground water units, the 2013 Rainfall Atlas and 2014 to Evapotranspiration updates in Hawaii have been a major part of that effort. Recalculating recharges, sustainable yields, and inventorying sources and their use for new hydrologic units' boundaries are possible and relatively easy to do with geographic information systems technology and using the WRPP Robust Analytical Model (RAM) to re-estimate sustainable yields. However, going through the exercise must make geologic and hydrologic sense. Part of that effort is presently occurring in ongoing studies trying to determine the geohydrological relationship between all the different aquifer types within the aquifer system. The resolution of the surface water basins as shown in the section above will also require much more effort to determine surface hydrologic effects more relevant to the ahupua‘a areas.
There are also legal issues with using area smaller than hydrologic units that are designated as management areas. The hydrologic units are used to define standing when objections and/or requests for contested case are made as authorized and specified under HRS, §§174C-50(b) & 53(b) & HAR §13-171-19(e). A smaller designated area than the current KASA boundaries would raise some confusion as to who has standing within a hydrologic unit but is out outside the smaller 'area' within the hydrologic unit. Also, through Declaratory Ruling No. DEC-ADM97-A1, the Commission has set policy for administrative modifications of water use permits within single aquifer system areas.

Most importantly, carving up the hydrologic unit of the KASA into a smaller 'area' sets a precedent for carving up hydrologic units into smaller and smaller pieces, solely for the purposed of resolving more localized individual disputes, which is not the intent under the Water Code. It also sets a precedent of trying to manage ground water via ahupua‘a, which is more relevant to surface water hydrologic units. Combining ground and surface water hydrologic units is allowable HRS §174C-3, but for the reasons described in earlier sections of this submittal it does not make sense in the KASA.

Alternative Paths to Designation (December 29, 2104 Preliminary Order HA-WMA 2013-1 C.5)

Staff and Commission comments from past discussions and meetings have recognized that this petition still incorporates designation as part of a potential solution. This petition for declaratory order misses the intent of the Commission's order C.5 for alternatives other than designation. Further, holding up further discussions of alternatives, in part, until the Commission acts on this petition appears to defeat the spirit

of negotiation that the Commission sought to foster with its June 23, 2015 guidance letter (See Exhibit 10) mentioning several issues that could be discussed within the context of the current KASA management scheme.

RECOMMENDATION

Staff recommends that the Commission:

1. Approve the processing of this declaratory order request under HRS §92, while preserving the option for deliberations under HRS Chapter 91 following public testimony

2. Deny the NPS petition for declaratory order regarding the KASA.

Respectfully submitted,

W. ROY HARDY
Acting Deputy Director

Exhibit 1	Location Map of KASA
Exhibit 2	NPS Petition for Declaratory Order
Exhibit 3	USGS 5-7-15 letter to NPS for KASA ahupua'a recharge
Exhibit 4	Testimony up to 5-20-15 CWRM meeting received on the petition for declaratory order
Exhibit 5a-b	Overlay of 2008 Surface & Ground Water Hydrologic Units and Ahupua'a in the KASA
Exhibit 6	Basal and High-Level Areas in the KASA
Exhibit 7	Profile of Ground Water Occurrences with Hydrologic Units in the KASA
Exhibit 8	Surface Water Hydrologic Units considerations within the KASA
Exhibit 9	Topography of the KASA
Exhibit 10	June 23, 2015 CWRM guidance letter to County & NPS for negotiations

APPROVED FOR SUBMITTAL:

SUZANNE D. CASE
Chairperson

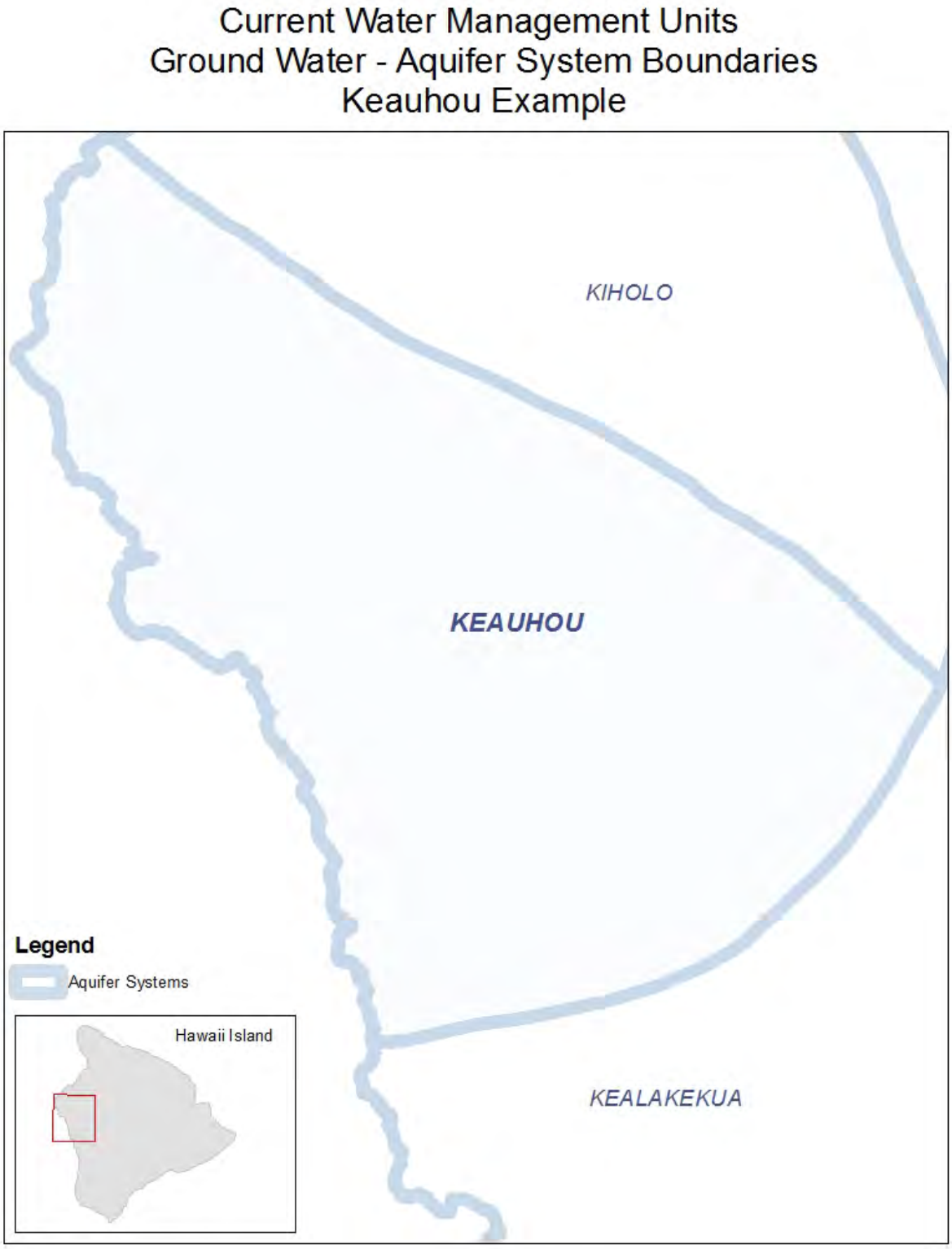
Current Water Management Units
Ground Water - Aquifer System Boundaries
Keauhou Example
KIHOLO
KEAUHOU
KEALAKEKUA
Legend
Aquifer Systems
Hawaii Island

Exhibit 1

National Park Service
U.S. Department of the Interior

Kaloko-Honokōhau
National Historical Park

73-4786 Kanalani Street # 14
Kailua-Kona, Hawai'i 96740

808 329-6881 Phone
808 329-2597 Fax

Kaloko-Honokōhau

IN REPLY REFER TO:
L54 2015-05

March 25, 2015

Carty S. Chang, Chairperson
Commission on Water Resource Management
P.O. Box 621
Honolulu, HI 96809

Subject: Petition for Declaratory Orders

Dear Mr. Chang:

I respectfully submit this petition for declaratory orders to the Commission on Water Resource Management pursuant to Hawaii Administrative Rules §13-167-81. The petition seeks to clarify whether an "area" other than a "hydrologic unit" as defined by the State Water Code can be designated a water management area. The petition is submitted to aid in our exploration of alternative paths of actions that may be taken in order to minimize risks to non-consumptive public trust uses of water in the area of Kaloko-Honokōhau National Historical Park. This question was initially raised by the National Park Service in a meeting with Commission staff on June 14, 2010, and then by Commissioner Pavao in the December 10, 2014 Commission meeting.

In December, 2014, the Commission issued a Preliminary Order requesting that the County of Hawai'i and the National Park Service meet, with participation of the Commission staff, and "explore and negotiate alternative paths of action, other than ground water designation of the Keauhou aquifer ..." I am pleased to inform you that our first meeting occurred on March 3, 2015 in Kona and that a second meeting is scheduled for March 31, 2015. These discussions would be greatly assisted by an expeditious ruling on the above-noted question of law.

Representatives of the National Park Service can be present at the Commission's April 15, 2015 meeting to provide additional information and answer questions regarding the petition. We are also available to speak to Commission staff and the Department of the Attorney General as needed. Please contact Bill Hansen (970) 225-3532 with any questions regarding this submittal.

Sincerely,

Tammy Ann Duchesne
Superintendent

encl: Petition for Declaratory Orders
cc: William P. Kenoi, Mayor, County of Hawai'i

EXHIBIT 2

BEFORE THE COMMISSION ON WATER RESOURCE MANAGEMENT OF THE STATE OF HAWAI`I

In the Matter of:	)	NATIONAL PARK SERVICE'S
PETITION FOR	)	PETITION FOR DECLARATORY
DECLARATORY ORDERS	)	ORDERS

Pursuant to Haw. Admin. R. §§ 13-167-81 (1988), the National Park Service (NPS) petitions the Commission on Water Resource Management ("Commission") for declaratory orders regarding the applicability of specific statutes and rules to the designation of a water management area by the Commission. As the Hawaii Supreme Court noted in *Citizens Against Reckless Development v. Zoning Board of Appeals*, 159 P.3d 143, 155-156, the underlying state statute, HRS § 91-8 (2014), "is meant to provide a means of seeking a determination of whether and in what way some statute, agency rule, or order, applies to the factual situation raised by an interested person." The afore-mentioned rule provides in relevant part that "petitions [for the issuance of declaratory orders] shall cite the statutory authority involved, shall include a complete statement of the facts, reasons, or grounds prompting the petition together with full disclosure of the petitioner's interest * * *."

REASONS FOR THE FILING OF THE PETITION

The genesis of this petition arises from the uncertainty surrounding the interpretation of the term "area" in the statutory provision (§ 174C-41) of the state water code that authorizes the Commission to designate a water management area. This provision provides:

> When it can be reasonably determined, after conducting scientific investigations and research, that the water resources in an **area** may be threatened by existing or proposed withdrawals or diversions of water, the commission shall designate the **area** for the purpose of establishing administrative control over the withdrawals and diversions of ground and surface waters in the **area** to ensure reasonable beneficial use of the water resources in the public interest. (emphasis supplied)

Despite using the term "area" three times in this section, the water code does not contain any independent definition of the term. Although § 174C-3 does define a "water management area" as "a geographic area which has been designated pursuant to section 174C-41 as requiring management of the ground or surface water resource, or both," no definition of the term "geographic area" is subsequently provided. Although the definition of a "water source" contained in the code does reference the term "area", it does so only in order to explain that a water source may include "an area such as a watershed defined by topographic boundaries, or a definitive ground water body." § 174C-3. Finally, the administrative rules promulgated by the Commission likewise do not provide any definition of the term "area".[1]

This uncertainty regarding the meaning of the term "area" as it relates to the designation of a water management area recently gave rise to a dialogue between Commissioner Milton Pavao and representatives of the NPS (Paula Cutillo and Jonathan Likeke Scheuer) at a public meeting of the Commission on December 10, 2014, that underscores the importance of clarifying this term for the purposes of designating a water management area. The meeting at which the dialogue took place was held to allow the Commission to review the Preliminary Findings of Fact regarding a petition filed by the NPS to designate the entirety of the Keauhou Aquifer System as a water management

[1] Although the term "hydrologic unit" is defined by the Code and appears primarily in Part III – Hawaii Water Plan, the focus of that part of the code is on long term planning. Thus, when discussing the geographical bounds of a water management area, the code uses the term "area" and not "hydrologic unit".

area and to hear public testimony regarding the petition. The above-referenced transcribed discussion is set out below, as we have transcribed it from a digital audio recording of the hearing provided by Commission staff (file named "Keauhou 12-10-14 Part II (NPS) WMA.WMA" provided by Katie Ersbak to Jonathan Scheuer):

> 40:30 Pavao: So you just want to designate the basal aquifer?
> 40:42 Cutillo (faintly): Yes, I...
> 40:45 Scheuer: I mean it, it, you know, I, I'm going to suggest that (Pavao starts speaking)
> 40:48 Pavao: Could this be worked out, is this something that could be worked out with the Commission staff to ensure that the basal wells, um, adhere to the concerns of the National Park?
> 41:00 Scheuer: I think that you are starting to ask questions that might pertain to the powers and duties of your Commission under the Code and that this would be a robust conversation in executive session with your attorney general.
> 41:12 Cutillo: And I would just like to add that we did approach the Commission staff about designating just the basal aquifer, I think two or three years ago we had a conversation with the Commission about that and they told us at the time that it was not possible because that's not, um, an official management unit.

This dialogue vividly illustrates the timeliness of the NPS petition, especially in light of the Commission's directive in its December 29, 2014 Preliminary Order regarding the NPS petition to designate the Keauhou Aquifer System that "alternative paths of action, other than groundwater designation of the Keauhou aquifer to address the issues in these proceedings" be explored. Compliance with that directive would be substantially aided by the issuance of declaratory orders by the Commission on whether an "area" other than the entire Keauhou Aquifer System could be designated as a water management area in order to protect the public trust resources located within Kaloko-Honokohau National Historical Park.

Therefore, for the reasons set forth above and in order to more fully explore "alternative paths of action", the NPS respectfully requests the Commission issue

Briefing Statement

Bureau:	National Park Service (NPS)
Issue:	NPS Water Management Area Petition and efforts to meet with County of Hawai'i
Park:	Kaloko-Honokōhau National Historical Park (Park), Hawai'i Island
Updated:	March 9, 2015

Key Points:

- Peer-reviewed science indicates that existing and proposed groundwater withdrawals threaten groundwater-dependent cultural and natural resources that are essential to the park's mission, purpose and values.
- The NPS has discussed the need for more careful management of Kona's water resources since 2007 with government agencies and other stakeholders, but not all parties agree that withdrawals threaten native fish and wildlife, and so there is still no explicit plan for protecting non-consumptive public trust uses of water.
- In September, 2013, the NPS filed a petition with the State Commission on Water Resource Management (Commission) to designate the Keauhou Aquifer System a Water Management Area (WMA) to ensure adequate water quantity for park resources.
- The legal standard for the Commission to designate a WMA is that it can be "reasonably determined" from "scientific investigations and research" that water resources "may be threatened." The state Water Code does not require scientific certainty of a threat, nor evidence that harm has already occurred.
- The NPS has conducted individual briefings with County Council members, state Legislators, and other county and state officials and stakeholders, and has participated in numerous government and community functions to provide background on and rationale for the NPS petition.

Background:

- In October, 2013, the Commission voted to defer a decision on the designating the Keauhou aquifer until late 2014 to allow time for further studies.
- In September and October, 2014, the Commission visited the park and the Kona area.
- On December 10, 2014, the Commission held a public meeting in Kona and after hours of public testimony, five of the seven Commisioners voted in favor of continuing the investigation and study period for the petition.
- In a December 29, 2014 preliminary order, the Commission requested that the NPS provide information about a) the quantity of groundwater needed to support natural and cultural resources at the park, b) specific traditional and customary practices that are exercised in the park, and c) how NPS manages traditional and customary practices at the park. Additionally, the Commission requested that the County of Hawai'i and the NPS (with the participation of the Commission staff) "*meet and, in good faith, explore and negotiate alternative paths of action, other than groundwater designation of the Keauhou aquifer...*"
- Between December and February, NPS officials sent three letters to the County expressing desire and eagerness to meet, proposed meeting dates, and reiterated the need for a legally enforceable framework to protect fresh-water dependent cultural and natural resources in the park.
- On March 3, 2015 the NPS had productive discussions with representatives of the County and Commission.
- The Mayor declared his commitment to preserving the island's cultural and natural resources and pledged to help the park accomplish its goals.

Current Status:

- On March 31, 2015 the NPS will meet again with Commission and County representatives to continue discussions and explore alternate paths to designation.
- The NPS will reach out to the Mayor and identify areas where the park can benefit from assistance.
- The NPS is working on identifying the traditional and customary practices that occur in the park.
- The NPS is working to identity the quantity of groundwater needed to support natural and cultural resources

Contacts:

Tammy Duchesne, Superintendent, Tammy_Duchesne@nps.gov, (808)557-2092
Bill Hansen, NPS Water Rights Branch Chief, Bill_Hansen@nps.gov, (970) 225-3537

Intra-Agency Deliberative Process Memorandum Excluded From Disclosure Pursuant to Exemption 5 of FOIA – Do Not Distribute Outside of NPS – Place Only In Confidential Files

Briefing Statement

Bureau:	National Park Service (NPS)
Issue:	Petition for Declaratory Orders and Negotiated Settlement Concepts
Park:	Kaloko-Honokōhau National Historical Park (KAHO)
Updated:	March 16, 2015

Key Points:

- In a December, 2014 Preliminary Order, the State Commission on Water Resource Management (Commission) requested that the NPS, the County of Hawaii, and Commission staff meet and "in good faith, explore and negotiate alternative paths of action, other than groundwater designation of the Keauhou aquifer" as a state water management area.
- The area that contributes fresh groundwater to the park is smaller than the administrative boundaries of the Keauhou aquifer.
- Designating only the park's "area of concern" is an alternative that alleviates some stakeholder concerns while minimizing risk to the park's water resources.

Background:

- Existing and proposed groundwater withdrawals threaten cultural and natural resources that are essential to the park's mission.
- In September, 2013, the NPS filed a petition with the Commission seeking designation of the Keauhou aquifer as a water management area (WMA) to protect park resources.
- There is wide-spread opposition to designation within the development community and among local, county, and state decision-makers and elected officials.
- The State Water Code is not clear as to whether a smaller area within than the Keauhou Aquifer System Area can be designated a WMA.
- Hawaii Administrative Rules allow for declaratory orders regarding the applicability of specific statutes and rules to a factual situation raised by the petitioner.
- On March 3, 2015, the NPS discussed a petition for declaratory orders and other settlement concepts with representatives of the County and the Commission.
- The petition for declaratory orders demonstrates that the NPS is sincerely seeking alternatives and a ruling will clarify whether designation of a subarea is truly feasible.
- Following the ruling, the NPS can consider (1) amending its WMA petition to identify a subarea for designation; and (2) proposing a settlement that caps groundwater withdrawals within the subarea at existing rates and includes an automatic trigger for designation if the cap is exceeded.

Current Status:

- The U.S. Geological Survey is running model simulations to inform the delineation of a subarea within which groundwater withdrawals may adversely affect park resources.
- The NPS is preparing settlement terms and is scheduled to meet with the County and Commission staff in Kona on March 31, 2015.
- The petition for declaratory orders is ready for the Regional Director's signature.

Contacts:

Tammy Duchesne, KAHO Superintendent, tammy_duchesne@nps.gov, (808) 557-2092
Bill Hansen, NPS Water Rights Branch Chief, bill_hansen@nps.gov, (970) 225-3537

United States Department of the Interior
U.S. GEOLOGICAL SURVEY
Pacific Islands Water Science Center
1845 Wasp Boulevard, Building 176
Honolulu, Hawaii 96818

Phone: (808) 690-9600/Fax: (808) 690-9599

May 7, 2015

Mr. William Hansen
Water Rights Branch
National Park Service
1201 Oakridge Drive, Suite 250
Fort Collins, CO 80525

Dear Mr. Hansen:

Subject: Estimates of mean annual recharge (using 2008 land cover and 1984-2008 rainfall) for the Keauhou aquifer system by ahupua'a

In response to your request of April 28, 2015, we are providing more detailed results of mean annual recharge, described in the U.S. Geological Survey Scientific Investigations Report 2011-5078 (*A Water-Budget Model and Estimate of Groundwater Recharge for the Island of Hawai'i*), for the Keauhou aquifer system by ahupua'a.

The Kona-area submodel described in the report estimated the spatial distribution of mean annual recharge for 1984-2008 rainfall and 2008 land-cover conditions. The Kona-area submodel covered the Kiholo, Keauhou, Kealakekua, and Kaapuna aquifer systems, which are management areas defined by the State of Hawai'i Commission on Water Resource Management, and average recharge was reported for the area as a whole. Table 1 attached to this letter presents average recharge in the Keauhou aquifer system and estimated recharge is shown by ahupua'a, and also by type of groundwater occurrence (coastal freshwater-lens system and high-level groundwater system) within the Keauhou aquifer system.

If you have any questions or concerns regarding these results, please feel free to contact Delwyn Oki of my staff at 808-690-9598 or by e-mail at dsoki@usgs.gov.

Sincerely,

Stephen S. Anthony
Center Director

Attachment

cc: Roy Hardy, State of Hawai'i Commission on Water Resource Management
Keith Okamoto, County of Hawai'i Department of Water Supply

EXHIBIT 3

Table 1. Estimated mean annual recharge (using 2008 land cover and 1984–2008 rainfall) in the Keauhou aquifer system by ahupua'a (land division). Estimates are from the Kona-area submodel documented by Engott (2011). Ahupua'a names are as they appear, in some cases truncated, in the geographic information system shapefile from the State of Hawai'i (2010). [Coastal, area over the coastal freshwater-lens system in the Keauhou aquifer system; High level, area over the inland area with high groundwater levels (Tillman and others, 2014) in the Keauhou aquifer system]

	Recharge, in million gallons per day	
Ahupua'a	**Coastal**	**High level**
Makalawena	0.08	--
Mahai'ula	0.87	0.01
Kaulana, Awalua, 'Ōh	4.31	1.57
Kau	1.62	0.37
Maka'ula	0.26	0.03
†Haleohiu	0.62	0.05
†Hamanamana	0.81	0.08
Kalaoa 1-5	3.40	0.61
'O'oma 1	1.74	0.08
'O'oma 2	1.57	0.11
Kohanaiki	1.46	0.22
Kaloko	2.35	3.17
Honokōhau 1-3	2.52	2.29
Kealakehe	4.05	1.77
Keahuolū	2.80	1.53
Lanihau 1-2, *Moeauo	1.84	2.27
†Puaa 1	0.11	0.59
†Puaa 2-3, Wai'aha 1	1.24	0.83
Puapua'a 2	0.32	0.04
Hōlualoa 1-2	1.39	5.67
Hōlualoa 3	0.22	0.16
Hōlualoa 4	0.39	0.67
†Kaumalumalu, Pāhoeh	1.12	3.40
Kahalu'u	1.50	4.98
Keauhou 1	1.24	5.48
Keauhou 2	0.85	16.54
Honalo, Mā'ihi 1-2,	0.58	7.87
Honuaula	--	1.81
Ka'ūpūlehu	--	0.86
Honuaula	--	3.63
Total	39.24	66.69

The following symbols are defined in the documentation for the geographic information system shapefile as follows:
†Not found in Place Names of Hawaii [*see reference list below*]
*Pronunciation and meaning uncertain

References

Engott, J.A., 2011, A water-budget model and assessment of groundwater recharge for the Island of Hawai'i: U.S. Geological Survey Scientific Investigations Report 2011-5078, 53 p.

Pukui, M.K., Elbert, S.H. and Mookini, E.T., 1974, Place names of Hawaii: University Press of Hawai'i, Honolulu, 289 p.

State of Hawai'i, 2010, Ahupuaa shapefile, downloaded March 10, 2015 from http://planning.hawaii.gov/gis/download-gis-data/.

Tillman, F.D., Oki, D.S., Johnson, A.G., Barber, L.B., and Beisner, K.R., 2014, Investigation of geochemical indicators to evaluate the connection between inland and coastal groundwater systems near Kaloko-Honokōhau National Historical Park, Hawai'i: Applied Geochemistry, v. 51, p. 278-292.

From: Peter T Young
To: Peter T Young
Subject: Issues Related to the National Park's Petition for Declaratory Orders (March 25, 2015)
Date: 04/14/2015 10:28 AM
Attachments: Issues Related to NPS Petition for Declaratory Order.pdf
Why Designation of Ahupuaa or Portion of Aquifer System Basal Lens is not Appropriate.pdf
NPS Petition for Declaratory Order-03-25-15.pdf

This is a call to action.

Under Water Commission rules, and apparent advice of the Attorney General's office, the Water Commission can act behind closed doors with no further input on the National Park's Petition for Declaratory Orders.

That means the Water Commission may rely solely on the information provided by the National Park with no additional input from others.

If you agree with many that the recent National Park's Petition for Declaratory Orders is inappropriate and not warranted, please contact Roy Hardy, acting-deputy of the Water Commission and let him know:

1. you oppose the petition for declaratory orders
2. the suggestion that designation of a part of the aquifer (component part of groundwater basin or at ahupua'a scale) is not consistent with the rules or practice of the Water Commission
3. you strongly request that a hearing be held in Kona to address the petition prior to any Water Commission action with others being given equal opportunity to provide input

Roy Hardy's e-mail is: roy.hardy@hawaii.gov

The following and attached is a review of the National Park's recent Petition for Declaratory Orders and have serious concerns.

On March 25, 2015, the Kaloko-Honokōhau National Historical Park (National Park) submitted a Petition for Declaratory Orders to the Commission on Water Resource Management (Water Commission.)

"(I)n order to more fully explore 'alternative paths of action', the NPS respectfully requests the Commission issue declaratory orders determining whether the following constitute an 'area' susceptible to designation pursuant to the state water code and the Commission's administrative rules:

1. The basal (coastal freshwater-lens) groundwater system within the Keauhou Aquifer System Area, and;
2. One or more ahupua'a (historic land divisions) within the Keauhou Aquifer System Area, and;
3. Some combination of 1 and 2."

The suggestion that designation might be limited to the basal aquifer, a limited number of ahupua'a

EXHIBIT 4

or some combination of these raises some serious issues related to the State water management area designation process, the rights of property owners and the County's land use planning process.

The following highlight some of the concerns and issues related to the premise of the Park's petition.

These are further expanded upon in the attached:

- No Evidence that Groundwater Withdrawals Are Negatively Impacting Resources
- National Park Continues to Reference the outdated 1999 USGS (Oki, et al) Mathematical Model
- Designating the Basal Aquifer Does Not Eliminate the National Park's Claims of Harm
- Pumping from Existing Wells Would Have to be Reduced If Ahupua'a Are Designated

The Petition for Declaratory Orders includes a briefing statement that, in part, notes, "the NPS can consider (1) amending its WMA petition to identify a subarea for designation; and (2) proposing a settlement that caps groundwater withdrawals within the subarea at existing rates and includes an automatic trigger for designation if the cap is exceeded."

In a public meeting, a representative of the National Park said "The sustainable yield for the four ahupua'a that the park falls in is 4.8-MGD ... pumping is already just under 80% of sustainable yield for the four ahupua'a that the park falls in. And, in fact, the capacity of those pumps to pump is just under 180% of sustainable yield."

"Now, there is another well that has already been built; the private developer of that well is trying to give it to the County ... Department of Water Supply. It is called the Palani well. The Palani well is supposed to pump 1-MGD directly mauka of the park."

"That would take pumping to just under 100% of sustainable yield of the four ahupua'a that the park falls in (February 12, 2015, Rotary Club of Kona.)

Here is a link to the video of the presentation to the Rotary Club of Kona:
https://www.youtube.com/watch?v=RXdUVjM1Sog

Of course, the National Park's proposal is inconsistent with the nature of aquifers.

Peter T. Young, President
Ho'okuleana LLC
... to take responsibility ...

1539 Kanapu`u Drive
Kailua, Hawai`i 96734

(808) 226-3567 (Cell Phone)
peter.t.young (Skype)

PeterYoung@Hookuleana.com

www.Hookuleana.com

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Issues Related to
Kaloko-Honokōhau National Historical Park Petition for Declaratory Orders Concerning Designation of Keauhou Aquifer

On March 25, 2015, the Kaloko-Honokōhau National Historical Park (National Park) submitted a Petition for Declaratory Orders to the Commission on Water Resource Management (Water Commission.)

As noted by the National Park, "The genesis of this petition arises from the uncertainty surrounding the interpretation of the term 'area' in the statutory provision (§174C-41) of the state water code that authorizes the Commission to designate a water management area. This provision provides:

> 'When it can be reasonably determined, after conducting scientific investigations and research, that the water resources in an **area** may be threatened by existing or proposed withdrawals or diversions of water, the commission shall designate the **area** for the purpose of establishing administrative control over the withdrawals and diversions of ground and surface waters in the **area** to ensure reasonable beneficial use of the water resources in the public interest.'" (emphasis added by the National Park)

"Despite using the term 'area' three times in this section, the water code does not contain any independent definition of the term. Although §174C-3 does define a 'water management area' as 'a geographic area which has been designated pursuant to section 174C-41 as requiring management of the ground or surface water resource, or both,' no definition of the term 'geographic area' is subsequently provided."

"(I)n order to more fully explore 'alternative paths of action', the NPS respectfully requests the Commission issue declaratory orders determining whether the following constitute an 'area' susceptible to designation pursuant to the state water code and the Commission's administrative rules:

1. The basal (coastal freshwater-lens) groundwater system within the Keauhou Aquifer System Area, and;
2. One or more ahupua'a (historic land divisions) within the Keauhou Aquifer System Area, and;
3. Some combination of 1 and 2."

The suggestion that designation might be limited to the basal aquifer, a limited number of ahupua'a or some combination of these raises some serious issues related to the State water management area designation process, the rights of property owners and the County's land use planning process.

The following highlight some of the concerns and issues related to the premise of the Park's petition.

These are further expanded upon in the following pages:

- No Evidence that Groundwater Withdrawals Are Negatively Impacting Resources
- National Park Continues to Reference the Outdated 1999 USGS (Oki, et al) Mathematical Model
- Designating the Basal Aquifer Does Not Eliminate the National Park's Claims of Harm
- Pumping from Existing Wells Would Have to be Reduced If Ahupua'a Are Designated

No Evidence that Groundwater Withdrawals Are Negatively Impacting Resources

In a 'Briefing Statement' related to the Petition, the National Park noted, "Existing and proposed groundwater withdrawals threaten cultural and natural resources that are essential to the park's mission."

However, the National Park and others who have studied the area ALL consistently conclude there is 'no evidence' of harm:

Paula Cutillo, Ph.D., Hydrologist for the National Park Service

"The water resources in the Park include the coral reefs, two fish ponds and a fish trap, over 185 anchialine pools and wetlands. ... These resources are relatively healthy; we have no evidence that existing pumping has adversely affected these resources."

Tammy Duchesne, the Park Superintendent (who submitted the petition:)

"We do not have any evidence that pumping wells have adversely affected water resources in the park." (November 15, 2014, e-mail)

Dr Donald Thomas, Ph.D., UH Research Faculty

"(N)either the National Park Service, or anyone else's field data has shown a likely impact from use of high level water to supply the Kona residents. ... Contrary to what the National Park suggests, scientific evidence shows that withdrawals of water from the high level aquifer will most likely have a negligible impact on the makai aquifer at the National Park."

Summary of Scientific Research on the Northern Section of the Keauhou Aquifer System

"The findings of these studies come to a consistent conclusion: no evidence collected to date indicates that withdrawals of groundwater resources from the high-level and basal aquifers in the northern section of the Keauhou Aquifer System have negatively impacted basal groundwater, the ponds, and the nearshore marine waters."

Tom Nance, PE, Hydrologist/Water Resource Engineer

"High level pumpage began in 1994 and is now at about 4.0 to 4.5 MGD ... The TNWRE monitoring data (of continuous water level recording in the Kamakana well and time series salinity profiles in three others in the immediate vicinity of the National Park) establish that no impact to basal groundwater as a result of high level groundwater pumpage has been identified to date."

Steve Dollar Ph.D., UH Research Faculty, Coastal Zone & Coral Reef Specialist

"More recent studies in 2012 reveal consistent input of groundwater along the landward shoreline of the pond, resulting in steep gradients of salinity and inorganic nutrients found in groundwater. These results suggest that there has not been a detectable decrease in basal groundwater to the ponds; in fact the opposite appears to be the case".

Dr Richard Brock, Ph.D., Researcher at UH, Anchialine Pond Specialist

"(T)he Kohanaiki development ... requirement for a water quality monitoring program to insure that the quality of the ground and nearshore marine waters ... is the most stringent of all such non-potable monitoring programs in West Hawai'i (i.e., frequency of sampling, numbers of samples). ... Despite the fluctuations in concentrations of some nutrients in anchialine pools, there is no evidence of decline to pond biota connected to changes in water quality."

Steve Bowles, Groundwater Geologist

"Cumulative hydro-geologic data and field observations of the Keauhou Aquifer System obtained during the past half century support the conclusion that declaration of the Keauhou Aquifer System is not necessary at this time."

Natural Energy Laboratory of Hawai'i Authority

"32 Years of Monitoring Results: NELHA's monitoring program has found no evidence of harmful change to its benthic, fish biota, and anchialine pond communities".

National Park Continues to Reference the Outdated 1999 USGS Mathematical Model

The National Park continues to state, **"Peer-reviewed science indicates that existing and proposed groundwater withdrawals threaten groundwater' dependent cultural and natural resources that are essential to the park's mission, purpose and values."**

The 'science' they cite is 'Ground-Water Resources in Kaloko-Honokōhau National Historical Park, Island of Hawaii, and Numerical Simulation of the Effects of Ground-Water Withdrawals' (Oki, et al., 1999.)

However, the National Park fails to mention that the Oki model notes its own serious limitations, especially that:

> **"The model used in this study cannot predict the distribution of salinity within the aquifer and is not capable of predicting water quality changes in the Park." (Oki et al., 1999)**

Changes in salinity and water quality are the very things the National Park claims the model predicts, yet the model states it cannot do that. And, the National Park uses it anyway, and that model forms the foundation of their petition and presentations.

Likewise, Dr. Don Thomas, Ph. D., UH Research Faculty, notes the Oki, et al., 1999 model is outdated and inconsistent with present understanding of the groundwater in this area:

> "The National Park is using the modeling done by Oki et al., 1999 to base their allegation that substantial impacts will occur. However, the numerical modeling of the Keauhou aquifer by Oki et al. was done prior to the general recognition of the significance of the deep aquifers described above. Hence, they did not consider any of the processes that we now have strong evidence are occurring in the Keauhou aquifer."
>
> "As a result, the conclusions drawn by the Oki et al. study of the impact of groundwater withdrawal from the mauka aquifers on the makai basal lens cannot be considered to be accurate. The inferred reduction of mauka to makai flow from the high level aquifers, that might result from development of the high-elevation aquifers, is clearly over-estimated in the model presented, as is the degree of thinning of the makai aquifer; hence, the true effect of withdrawal of some fraction of the mauka high level water is likely to be substantially less than the Oki et al. model predicts and could, in fact, be negligible."

Designating the Basal Aquifer Does Not Eliminate the National Park's Claims of Harm

Suggesting that a resolution and possible compromise to the initial Petition for Designation is subarea designation, it appears that the National Park is expecting people to think the future will be without controversy (and/or confrontation) from the National Park on land use matters in the future. The following helps to illustrate the probable means the National Park will take to further restrict the County's land use controls in the region.

Kahalu'u Shaft

A major source of water for North Kona has been the Kahalu'u Shaft. Completed in 1976, the shaft is situated approximately 8.5-miles from the National Park. While many may agree that the pumpage at that distance may have no or negligible effect on groundwater resources in and around the park, by limiting water management area designation to only the basal lens will not eliminate the National Park's continued claims of harm.

The National Park's initial Petition for designation speaks of "the encroachment of salt water in basal wells supplying the North Kona Water System (that) threatens to place a disproportionate stress on basal groundwater in Kaloko-Honokōhau." The National Park then notes "elevated levels of sodium and chloride" from the Shaft and nearby wells.

The National Park Petition for Designation further notes, "Thus, saltwater intrusion in the Kahalu'u Shaft and Wells has resulted in higher rates of groundwater withdrawals within the four ahupua'a of the Park. This increase in the number of pumping wells located in the vicinity of Kaloko-Honokōhau threatens public trust resources because groundwater withdrawals from wells directly upgradient of the Park will have a greater effect on freshwater discharge to coastal ecosystems within the Park (e.g., Oki et al. 1999)."

As previously noted, the National Park continues to cite Oki et al., 1999 as the basis for identifying changing salinity, even though that mathematical model notes its own limitation that it "cannot predict the distribution of salinity within the aquifer and is not capable of predicting water quality changes in the Park." Likewise, Dr Don Thomas, Ph.D. notes the Oki mathematical model is outdated and uses assumptions that are not consistent with present understanding of the nature of the groundwater and aquifer.

Brackish Water Withdrawals

The National Park does not limit its concerns on the basal lens to the Kahalu'u Shaft, They also note withdrawals from brackish wells.

In their Petition for Designation the National Park notes, "Existing and planned withdrawals of brackish groundwater, as well as the disposal of saline water, endangers the stability of the coastal groundwater system."

Their unsubstantiated claim that "planned withdrawals of brackish groundwater, as well as the disposal of saline water, endangers the stability of the coastal groundwater system" is refuted by their own findings (that there is "no evidence that existing pumping has adversely affected these resources.")

In addition, the ongoing monitoring data at Kohanaiki refutes their claims.

As part of the permitting process allowing the Kohanaiki development to occur, the County of Hawai'i imposed a requirement for a water quality monitoring program to insure that the quality of the ground and nearshore marine waters are not degraded as the development proceeds. This monitoring program was approved by federal, state and county agencies and the methods follow the Hawai'i State Department of Health (DOH) Regional water quality protocols (HAR Chapter 11-54-[6]d.)

For each survey, 32 marine samples are from control sites and 40 marine samples come from the waters fronting the Kohanaiki project site. On land samples are drawn from 14 wells, 16 anchialine ponds and one reservoir all located on the project site.

Because the Kohanaiki project site is directly north of the KAHO, the water quality monitoring program is the most stringent of all such non-potable monitoring programs in West Hawai'i (i.e., frequency of sampling, numbers of samples). Dr Richard Brock has conducted the monitoring program.

Dr Brock concluded (relative to Ocean resources,) there is "No evidence of increased nutrients due to development when compared to adjacent control areas." "In no case is there any evidence to suggest that the changes in water quality parameters are having any negative impact to the resident reef species."

On land, "Transitory increases seen in anchialine pools but the signature is lost at the shoreline. No decline found in the pond biota connected to changes in water quality."

High Level – Basal Interconnection

Another issue that suggests that simply isolating designation to the basal aquifer will not stop the objections related to pumping from high level wells nor negate the National Park's claims of the interconnection between the basal lens and the high level water.

In the National Park's Petition for Designation, they claim, according to the Oki, et al. 1999 "model, as much as 90% of the recharge to the basal groundwater system originates from the seaward flow of higher-elevation groundwater across an undefined low permeability geologic structure. Fresh groundwater not withdrawn by wells in the high water-level area is believed to flow down-gradient to the basal lens (Oki et al. 1999)."

Recently (2014,) the USGS and others conducted isotopic analysis to verify a 'connection' between the two (Investigation of Geochemical Indicators to Evaluate the Connection between Inland and Coastal Groundwater Systems near Kaloko-Honokōhau National Historical Park, Hawai'i.)

That study concluded, "Analyses of stable isotopes of water, however, strongly suggest high-altitude recharge is the source of at least part of the freshwater in many FWL-system (fresh water lens) groundwater samples, requiring a hydrologic connection between the HL and FWL systems."

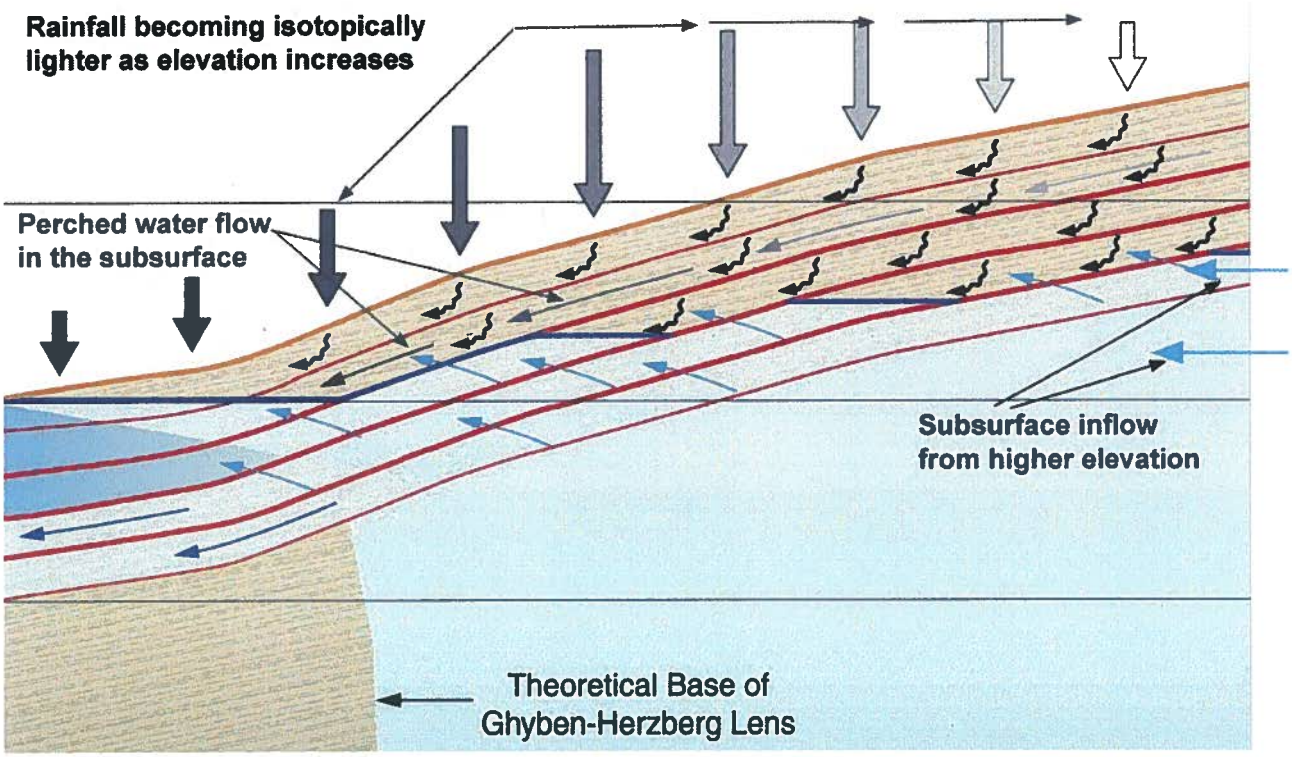
Dr Don Thomas "Layer Cake" Model and Flow of Water Through the Aquifer

However, recent and ongoing groundwater monitoring and data for regional well development has led to a better understanding of the nature of the Keauhou Aquifer.

The information suggests a partially-perched "Layer Cake," rather than a "Dike Impounded" formation, that forms the high level water.

The science suggests that the high level and basal aquifers are not closely interconnected and the only clear evidence of discharge from the high level aquifers is through deeply buried, confined aquifers that are bypassing the coastal aquifers and discharging into the deep ocean.

Illustration of Dr Thomas' "Layer Cake" model and flow of water through the aquifer:



The isotopic data for the high level water shows that most of it is coming from recharge at significantly higher elevations than the local rainfall in the mid-elevations of Hualālai; this is confirmed by the nearly 3,000 year average age of the water in the high level aquifer.

This can best be explained by impermeable, so-called perching layers that intercept local rainfall and carry it downslope into the makai aquifers.

These perching layers have been encountered during drilling of wells accessing the high level aquifer and, in the only instance where that water was sampled, it was found to be both isotopically distinct from the high level waters and to have a much younger age than the water in the high level aquifer.

In contrast, the age data for the makai basal water suggests that it is quite young -- although more age data needs to be gathered to further confirm that – and hence, the most likely source of the isotopically light water in the coastal waters is from perched-layer intercepted rainfall in the mauka portion of the Keauhou aquifer.

In other words, not much of the "local" rainfall in the vicinity of the high level wells is actually getting into the high level aquifer.

The only alternative that can explain the isotopic and age data for the high level aquifer, with significant amounts of local recharge entering it, is that substantially larger amounts of much older recharge to the high level aquifers is coming into the Keauhou system from the adjacent regions in the Saddle and from Mauna Loa.

This analysis has led to several conclusions:

- The conclusion that high level water must be infiltrating into the makai aquifer is neither evidenced in the isotopic data nor supported by the currently available data sets
- There are variations in the overall isotopic compositions from north to south and it's likely that multiple buried structures are responsible for variations in infiltration and mixing of water from different sources ("one size doesn't fit all...")
- The significant age of the water in the high level aquifer would be consistent with migration of recharge from Mauna Loa or the Saddle region into Hualālai
- The evidence available suggests that withdrawals of water from the high level aquifer will have a negligible impact on the makai aquifer (aside from enhancing it through irrigation return)
- Nonetheless, the significant age of the high level water strongly suggests that the careful monitoring of the resource is appropriate

Dr Don Thomas draws several conclusions from the observations presented:

- The "layer cake" model is consistent with the well data from Kamakana and Keōpu Monitor wells
- A "bedded" confining layer can also act as a perching formation and perched water has been observed (and sampled)
- The perching layers intercept infiltrating rainfall recharge and redirect it to lower elevation recharge to the basal aquifer while allowing higher elevation recharge to infiltrate to the high level aquifer
- The interception of local rainfall recharge and re-directing it down-slope can account for the divergent isotopic compositions of the local recharge and underlying high level water
- Nonetheless, the isotopic compositions of the high level aquifers requires that recharge come from an elevation higher than Hualālai

National Park Has a Pattern of Seeking Intervention in Neighboring Land Use Cases

Rather than presenting plausible scientific findings that support their claims, Kaloko-Honokōhau National Historical Park consistently chooses the confrontational intervention/litigious approach (irrespective of what the science says.)

The National Park suggests that in the absence of designation, "the Commission is powerless to protect the public interest in the state's water resources." Of course, that is not true, either. The Water Commission has and uses many tools in protecting Hawai'i's water resources - designation is typically the last tool it uses.

We know the National Park repeatedly intervened or requested intervention in local land use matters. In 2003, the Kaloko-Honokōhau National Park presented a paper titled, "Using State Laws and Regulations to Protect Parks from Adjacent Development Impacts: A Case Study from Hawai'i" at the 'Protecting Our Diverse Heritage' conference sponsored by the George Wight Society.

(The George Wright Society promotes protected area stewardship by bringing practitioners together to share their expertise.)

As indicated by the paper's title, the focus is on "how development outside of a park might affect park resources and how a park can use state and local land use processes to help protect those resources." It summarizes the Kaloko-Honokōhau National Park's formal intervention "in an administrative hearing before the Hawaii Land Use Commission (LUC) regarding a proposed industrial development upslope of the park."

The paper concluded with "Lessons Learned" (some have suggested it is kind of a road map in using state laws and regulations to fight development.) As noted, the National Park feels, "Although federal laws, regulations, and management policies govern the management of national parks, parks have little control over surrounding lands."

It appears Hawai'i is not alone with the National Park Service filing protests and getting involved in regional land use matters. The Pahrump Valley Times (Nevada, Nov. 13, 2009) provides some interesting quotes from Peter Fahmy on a water-related issue (Fahmy is also the attorney for the Kaloko-Honokōhau National Historical Park:)

"Water Rights Attorney Peter Fahmy's name usually appears on the protests of water rights applications filed in Amargosa Valley that are protested by the National Park Service. Fahmy, who works for the National Park Service, vehemently defended the protests, designed to protect the Devil's Hole pupfish and springs, at Death Valley National Park, during a speech at the annual Devil's Hole workshop at the Furnace Creek Visitors Center last week."

"'I've had people say NPS stands for National Protest Service, and granted that's sometimes how it appears to some people: 'The Park Service is just filing protest after protest,' Fahmy told the gathering of numerous scientists. ... 'You have a fiduciary duty to protect that asset and if that means filing five, 10, 15, 20 protests a month, you do it. '"

Pumping from Existing Wells Would Have to be Reduced If Ahupua'a Area Designated

The Petition for Declaratory Orders includes a briefing statement that, in part, notes, "the NPS can consider (1) amending its WMA petition to identify a subarea for designation; and (2) proposing a settlement that caps groundwater withdrawals within the subarea at existing rates and includes an automatic trigger for designation if the cap is exceeded."

Suggesting the 'Designated Area' should include only the ahupua'a in which the National Park is situated will effectively mean the existing wells would only be allowed to pump significantly less than their capacity (taking an approach the National Park has presented at public meetings (February 12, 2015, Rotary Club of Kona.) (A Park representative said present pumping exceeded SY in the four ahupua'a.)

The National Park appears to take a simplistic view of the distribution of the Sustainable Yield of the aquifer. Based on the recent presentation, it appears the National Park seeks to suggest a 'Sustainable Yield' for the four ahupua'a as:

- Calculate the relationship (percentage) of the land area of the four ahupua'a that touch the National Park to the total land area of the Keauhou Aquifer System Area
- Apply that percentage to the total sustainable yield of the Keauhou Aquifer
- The calculated result is suggested to be the 'Sustainable Yield' for the four ahupua'a

The Kaloko-Honokōhau National Historical Park is situated in four ahupua'a Kohanaiki, Kaloko, Honokōhau and Kealakehe (north to south.) The land area of each (and total) is:

Ahupua'a	**Land Area**
Kohanaiki	2.66 Sq Mi
Kaloko	6.75 Sq Mi
Honokōhau	5.80 Sq Mi
Kealakehe	5.53 Sq Mi
Total Land Area - 4 Ahupua'a	**20.74 Sq Mi**

The above map illustrates the Keauhou Aquifer System Area in the vicinity of the Kaloko-Honokōhau National Historical Park. The 4-ahupua'a are noted, as are the locations of the existing high-level wells.

Summary of relevant data:

- The Keauhou Aquifer has a total land area of approximately 165 Sq Mi
- Total Land Area of the four Ahupua'a encompassed at the Park is 20.74 Sq Mi
- That means the 4 ahupua'a make up approximately 12.7% of the total land area of the aquifer
- The present estimated Sustainable Yield of the Keauhou Aquifer is 38 MGD

Applying the percentage of overall land area (12.7%) to the overall Sustainable Yield (38 MGD,) the National Park is suggesting the 'Sustainable Yield' of the four ahupua'a is **4.78 MGD**. (This simplistic approach by the National Park ignores the transient nature of groundwater and a whole bunch of other factors.)

While the National Park may want everyone to believe this is reasonable and rational, they don't say what the computed capacity of existing wells in the four ahupua'a are – and they don't say that if the four ahupua'a are 'designated,' and their computed 'Sustainable Yield' is considered, that existing capacity of the wells exceeds the sustainability of the aquifer.

Existing Wells	**Anticipated Capacity**
Hualālai	1.51 MGD
Palani 1	1.60 MGD
Honokōhau	2.02 MGD
Existing Wells Capacity	**5.13 MGD**

National Park's Subarea (4 Ahupua'a) Pumping Exceeds Their Computed 'Sustainable Yield'

While the National Park suggests ahupua'a as a means to note a 'subarea' for potential designation – and in doing so, hints that they are working on establishing "caps (on) groundwater withdrawals within the subarea at existing rates and includes an automatic trigger for designation if the cap is exceeded."

In a public meeting, a representative of the National Park said "The sustainable yield for the four ahupua'a that the park falls in is 4.8-MGD ... pumping is already just under 80% of sustainable yield for the four ahupua'a that the park falls in. And, in fact, the capacity of those pumps to pump is just under 180% of sustainable yield."

"Now, there is another well that has already been built; the private developer of that well is trying to give it to the County ... Department of Water Supply. It is called the Palani well. The Palani well is supposed to pump 1-MGD directly mauka of the park."

"That would take pumping to just under 100% of sustainable yield of the four ahupua'a that the park falls in (February 12, 2015, Rotary Club of Kona.)

Here is a link to the video of the presentation to the Rotary Club of Kona:
https://www.youtube.com/watch?v=RXdUVjM1Sog

Since the existing wells pumping capacity exceeds the computed 'Sustainable Yield,' it is likely adjustments must be made to address the requirements of the law. (Of course, the National Park's proposal is inconsistent with the nature of aquifers.)

Why Designation of Ahupua'a or Portion of Aquifer System (Basal Lens) is not Appropriate

State Laws and Codes, as well as water resource planning documents, repeatedly state that the Hawai'i's Commission on Water Resource Management (CWRM) management of water resources needs to be coordinated and consistent.

At the present time, the lowest level (smallest hydrologic/management unit) for management, data collection and tabulation is at the Aquifer System Area level. All water planning documents (State Water Plan and all of its component sub plans) include management, monitoring and data collection at the Aquifer System Area Level.

The Water Commission purposefully-picked the Aquifer System Area as the smallest sub-region to provide a consistent basis for managing ground water resources. These units are primarily determined by subsurface conditions. In general, each island is divided into regions that reflect broad hydrogeological similarities while maintaining hydrographic, topographic, and historical boundaries where possible.

Likewise, the lowest level of the aquifer coding system is the Aquifer System Area; the coding is used to reference and describe the ground water hydrologic units delineated by CWRM. It is established to provide a consistent method by which to reference and describe ground water resources, and to assist in various water planning efforts.

The National Park is now suggesting a 'designated' area be limited to four ahupua'a that touch the National Park. The serious limitations of this suggestion include:

- Data is not calibrated at the ahupua'a scale
- For consistency, data collection, management and monitoring is done at the lowest level at the Aquifer System Area scale – no data is delineated by subareas or components of overall aquifer
- Ahupua'a are traditional land divisions in ancient Hawai'i. The ahupua'a boundaries are not related to surface- or groundwater characteristics or other modern water management or monitoring scenarios
- Groundwater is transient and is not confined to the ahupua'a scale; suggesting a designation at this scale is not consistent with management practice
- There is a serious lack of data to adequately manage and monitor at the ahupua'a scale

The National Park is also suggesting a 'designated' area be limited to the basal aquifer. The serious limitations of this suggestion include:

- HAR §13-171-2 Definitions notes, "'Hydrologic unit' means a surface drainage area or a ground water basin or a combination of the two." The rules do not differentiate between basal and high-level aquifer types.
- In one case the National Park suggests the ahupua'a scale (including only four aquifer that touch the National Park,) then it suggests 'only' the basal lens might be designated. (However the basal aquifer runs the entire length of the shoreline area from Makalawena to Hokulia, a distance of nearly 20-miles.) The suggestion of only addressing the basal lens is inconsistent.
- Scientific research of groundwater, ponds (fishponds and anchialine ponds) and ocean resources all state "The water resources in the Park include the coral reefs, two fish ponds and a fish trap, over 185 anchialine pools and wetlands. ... These resources are relatively healthy; we have no evidence that existing pumping has adversely affected these resources." (Paula Cutillo, Ph.D., Hydrologist for the National Park Service)
- "The findings of these studies come to a consistent conclusion: no evidence collected to date indicates that withdrawals of groundwater resources from the high-level and basal aquifers in the northern section of the Keauhou Aquifer System have negatively impacted basal groundwater, the ponds, and the nearshore marine waters." (Summary of Scientific Research on the Northern Section of the Keauhou Aquifer System)

The following are some other summaries on issues related to the National Park's petition:

1. **Aquifer System Areas are the scale of hydrologic units to provide consistency in managing ground water resources. (Recall the Rules define hydrologic Units as "a surface drainage area or a ground water basin or a combination of the two." - the groundwater basin is not further segregated into basal or high-level.)**

   (a) Supporting this, the Water Commission website, related to groundwater notes: (http://dlnr.hawaii.gov/cwrm/groundwater/hydrounits/)

   "Ground-water hydrologic units have been established by the Commission on Water Resource Management to provide a consistent basis for managing ground water resources. The units are primarily determined by subsurface conditions. In general, each island is divided into regions that reflect broad hydrogeological similarities while maintaining hydrographic, topographic, and historical boundaries where possible. Smaller sub-regions are then delineated based on hydraulic continuity and related characteristics. In general, these units allow for optimized spreading of island-wide pumpage on an aquifer-system-area scale."

   "An aquifer coding system is used to reference and describe the ground water hydrologic units delineated by CWRM. It is established to provide a consistent method by which to reference and describe ground water resources, and to assist in various water planning efforts." The CWRM website then includes maps of each Island, showing the Aquifer Sectors and Aquifer System Areas. (No other sub-area of these are in the management structure.)

   (b) The need for consistency is also noted in the rules discussing the Hawaii Water Plan (§13-170-2 Formulation of the Hawaii water plan:)

   "(§13-170-2 (c) In preparing the Hawaii water plan each county shall be divided into sections which shall conform as closely as practicable to hydrologic units. The plan shall describe and inventory the following information within each designated hydrologic unit:

   1. All water resources and water systems.
   2. All present uses.
   3. Sustainable yield. (The sustainable yield shall be determined using the best available information and shall be reviewed periodically. Where appropriate the sustainable yield may be determined to reflect seasonal variation.)
   4. Potential threats to water resources.
   5. Instream use and protection program for the surface watercourses in the area."

   There is no segregated mapping, coding, data collection, recharge estimates, sustainable yield estimates, monitoring or management at the ahupua'a level.

   "(§13-170-2 (d) Respective portions of the water resource protection plan, water quality plan, state water projects plan, and the water use and development plans of each county, shall be developed together to achieve maximum coordination and consistency. The development of the Hawaii water plan or any portion thereof shall proceed in coordination with and with attention to the Hawaii state plan described in chapter 226, HRS.

   (c) The Water Resource and Protection Plan (3.1.2. Applying the "Systems" Approach to Water Resource Management) notes:

   "The WRPP encourages effective ground and surface water management through the application of a hydrologic unit systems approach that focuses on the interaction and feedback that occurs between ground and surface water systems and management decisions."

(d) The WRPP then defines Groundwater hydrologic units and the CWRM Aquifer coding (3.3.3. Ground Water Hydrologic Units:)

"Ground water hydrologic units have been established by the Commission on Water Resource Management to provide a consistent basis for managing ground water resources. An aquifer coding system is used to reference and describe the ground water hydrologic units delineated by CWRM."

There is no segregated mapping, coding, data collection, monitoring or management at the ahupua'a level.

2. **The Aquifer System Area is the lowest level of management unit noted in the Water Commission's Aquifer Code.**

(a) The WRPP defines the basis for Aquifer Coding and Hydrologic Unit delineation (3.3.3.2. Basis for Ground Water Hydrologic Unit Delineations:)

"In general, each island is divided into regions that reflect broad hydrogeological similarities while maintaining hydrographic, topographic, and historical boundaries where possible. These divisions are known as Aquifer Sector Areas. Smaller subregions are then delineated within Aquifer Sector Areas based on hydraulic continuity and related characteristics. These sub-regions are called Aquifer System Areas. In general, these units allow for optimized spreading of island-wide pumpage on an aquifer-system-area scale. ... the Aquifer Sector Area and Aquifer System Area boundary lines should be recognized as management lines and not as hydrologic boundaries."

(b) The following is from Aquifer Identification And Classification For Moloka'i: Groundwater Protection Strategy for Hawai'i = John F. Mink & L. Stephen Lau:

"The Aquifer Code consists of locators, hydrology and geology, and reads as follows: Island-Aquifer Sector-Aquifer System-Aquifer Type. The code consists of eight digits: one for the Island, two each for Sector and System, and three for Type (two for hydrology; one for geology)." (An Aquifer Code is unique and non-repeatable in the State.)

a. Island - The global factor
b. Sector - A large region with hydrogeological similarities
c. **System - An area within a Sector showing hydrogeological continuity**
d. Type - Portions of a System having the same hydrological and geological features.

The aquifer code number begins with the U.S. Geological Service number for each island. The island numbers are 1-Niihau, 2-Kauai, 3-Oahu, 4-Molokai, 5-Lanai, 6-Maui, 7-Kahoolawe, and 8-Hawaii. A two-digit Sector number and a two-digit System number follow the island number.

3. **Water Rules related to Water Use Permits (for designated water management areas) limit those eligible to object (§13-171-19 Evaluation period) to those with 'land within the hydrological unit.'**

"(e) In acting upon any application, the commission need consider only those objections filed by a person who has some property interest in any land within the hydrologic unit from which the water sought by the applicant is to be drawn or who will be directly and immediately affected by the water use proposed in the application. The commission shall adopt rules governing the filing of objections and the persons having standing to file objections. [Eff. MAY 27, 1988] (Auth: HRS §174C-8) (Imp: HRS §§174C-5, 174C-50, 174C-52, 174C-53)"

4. Ahupua'a and 'The Watershed Myth'

"One of the most persistent myths in popular narratives is the idea that ahupua'a are usually stream drainages bounded by watersheds. Equating ahupua'a to watersheds is problematic because it empties the ahupua'a of its cultural context. Furthermore, empirical evidence clearly shows that most ahupua'a do not correspond to a watershed. Even if applying the most liberal interpretation of the concept, only 98 ahupua'a (5.4 %) can be regarded as bounded by watersheds. Of these there are none on Hawai'i Island ... The vast majority of ahupua'a throughout the islands, are regularly shaped (mauka to makai) but not watershed bounded." (Gonschur & Beamer)

"(A) more likely rationale for ahupua'a boundaries is probably a *culturally appropriate, ecologically aligned, and place specific* unit with access to diverse resources. ... The majority of ahupua'a seem to be constructed to ensure resource diversity." (Gonschur & Beamer)

5. Nature of Groundwater Flow

Recent groundwater research notes several unexpected conclusions: The internal structure of Hawai'i's volcanoes is more complex than has been generally recognized; Much larger volumes of groundwater are stored within Hawaii Island than current estimates have projected.; and accepted models of Hawai'i's hydrology do not adequately account for structural controls – e.g. perching formations - over groundwater storage and movement within the islands. (Thomas)

In the western part of the Island of Hawai'i, the groundwater-flow system consists of three main groundwater systems: a coastal unconfined-groundwater system in the form of a freshwater-lens system (FWL system;) a coastal confined-groundwater system (CC system) beneath the coastal freshwater-lens system, and an inland impounded groundwater system with high water levels. (USGS)

"The science suggests that the high level and basal aquifers are not closely interconnected and the only clear evidence of discharge from the high level aquifers is through deeply buried, confined aquifers that are bypassing the coastal aquifers and discharging into the deep ocean." (Thomas)

"(T)he age data for the makai basal water suggests that it is quite young – although more age data needs to be gathered to further confirm that – and hence, the most likely source of the isotopically light water in the coastal waters is from perched-layer intercepted rainfall in the mauka portion of the Keauhou aquifer." (Thomas)

This analysis has led to several conclusions:

- The conclusion that high level water must be infiltrating into the makai aquifer is neither evidenced in the isotopic data nor supported by the currently available data sets
- There are variations in the overall isotopic compositions from north to south and it's likely that multiple buried structures are responsible for variations in infiltration and mixing of water from different sources ("one size doesn't fit all...")
- The significant age of the water in the high level aquifer would be consistent with migration of recharge from Mauna Loa or the Saddle region into Hualālai
- The evidence available suggests that withdrawals of water from the high level aquifer will have a negligible impact on the makai aquifer (aside from enhancing it through irrigation return) (Thomas)

From: Marc Botticelli
To: roy.hardy@hawaii.gov
Subject: National Park's Petition for Declaratory Orders (March 25, 2015)
Date: 04/14/2015 10:53 AM

Dear Mr. Hardy,

I oppose the subject petition for declaratory orders. The suggestion to designate a part of the aquifer (component part of groundwater basin or at ahupua'a scale) is not consistent with the rules or practice of the Water Commission. I strongly request that a hearing be held in Kona to address the petition prior to any Water Commission action with others being given equal opportunity to provide input.

Very respectfully,

marc

Marc Botticelli, P.E.
President, Hawaii Scociety of Professional Engineers, Kona-Kohala Chapter

From: Wes Thomas Assoc- Chrys Yamasaki
To: roy.hardy@hawaii.gov
Subject: National Park Service Petition for Declaratory Orders
Date: 04/14/2015 11:10 AM

Dear Mr. Hardy:

As a 40+ year resident of Kona I have been appalled by the efforts of the National Park Service with regards to our Keauhou Aquifer. The recent National Park's Petition for Declaratory Orders is totally inappropriate and not warranted. As your position as acting deputy of the Water Commission I wanted to share my thoughts on the matter.

First, I (and many others who live and work in North Kona) oppose the petition for declaratory orders.

Second, the suggestion that designation of a part of the aquifer (component part of groundwater basin or at ahupua'a scale) is not consistent with the rules or practice of the Water Commission. When I first heard this concept at a presentation made by the National Park Service, I couldn't believe that they could make this suggestion with a straight face. How on earth can you quantify a portion of an aquifer. It is one entity. Picking and choosing a portion of it to suit their position, is not appropriate or scientifically possible.

Third, I strongly request that a hearing be held in Kona to address the petition prior to any Water Commission action with others being given equal opportunity to provide input. It is our community, our water resource, our livelihood, and our future generations that are affected. We must have an open process, open to input from the community and especially open to our technical community who can understand the short and long term ramifications of allowing an imperfect system to take place behind closed doors.

Please feel free to contact me if you have any questions or require more information from me.

Mahalo for your time and consideration.

Chrystal Thomas Yamasaki, LPLS
WES THOMAS ASSOCIATES
--Land Surveyors--
75-5749 Kalawa Street, Suite 201
Kailua Kona, Hawaii 96740
Phone: 808-329-2353
Fax: 808-329-5334
email: surveys@wtahawaii.com
www.wtahawaii.com

From: pdahlberg
To: roy.hardy@hawaii.gov
Cc: Marc Botticelli
Subject: NPS Petition for Declaratory Orders (March 25, 2015)
Date: 04/14/2015 11:34 AM
Attachments: Issues Related to NPS Petition for Declaratory Order.pdf
Why Designation of Ahupuaa or Portion of Aquifer System Basal Lens is not Appropriate.pdf

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Aloha Mr. Hardy,

With regards to the subject issue:

1. I oppose the petition for declaratory orders. This is not in good faith (kokua and ho'oponopono) as directed by CWRM at the public hearing.
2. It is believed that the designation of a part of the aquifer (component part of groundwater basin or at ahupua'a scale) is not consistent with the rules or practice of the Water Commission.
3. I strongly request that a hearing be held in Kona to address the petition prior to any Water Commission action with stakeholders (county officials, land owners, design professionals, community members, construction employees, etc) being given equal opportunity to provide input.

Thank you for your attention to this very important matter.

Peter JK Dahlberg, PE (11345-C, HI; C-74693, CA), R(S) 63628
m:(808) 895-6173 e:pdahlberg@hawaii.rr.com
Office: 74-5518 Kaiwi St. 3C, Kailua-Kona, HI 96740
(across HELCO, above Island Wide Solar, mauka side steps)

From: Marc Botticelli
Sent: Tuesday, April 14, 2015 10:44 AM
To: Afaq Sarwar (E-mail) ; Bennett Mark (E-mail) ; Bruce Witcher (E-mail) ; Chrystal Yamasaki (E-mail) ; Chuck Cartwright (E-mail) ; Dan Lanterman ; David Hein (E-mail) ; David M. Ross Jr. (E-mail) ; Gary Ashikawa (E-mail) ; Hugh Strom (E-mail) ; Jay Uyeda (E-mail) ; John Moore (E-mail) ; Jon Murai (E-mail) ; Kiran Emler (E-mail) ; Marc Botticelli ; Mark Morrison (E-mail) ; Mike Krochina (E-mail) ; Nancy Burns (E-mail) ; Nick Yamasaki (E-mail) ; Peter Dahlberg (E-mail) ; Riley Smith ; Sharon Chern (E-mail) ; Stephen Green ; mailto:steve@konawaiengineering.com ; Tom Yamamoto (E-mail)
Cc: mailto:peteryoung@hookuleana.com
Subject: FW: Issues Related to the National Park's Petition for Declaratory Orders (March 25, 2015)

Another update form Peter Young on the Keauhou Aquifer issue, and a "Call to Arms". Please read.

Thanks...marc

Marc Botticelli, P.E.
Project Engineer

Wesley R. Segawa & Associates, Inc.

73-5577 Kauhola Street
Kailua-Kona, Hawaii 96740

Committed To Quality Performance & Value

Phone: (808) 329-8249
Mobile: (808) 987-7653

From: Peter T Young [mailto:PeterYoung@Hookuleana.com]
Sent: Tuesday, April 14, 2015 10:27 AM
To: Peter T Young
Subject: Issues Related to the National Park's Petition for Declaratory Orders (March 25, 2015)

This is a call to action.

Under Water Commission rules, and apparent advice of the Attorney General's office, the Water Commission can act behind closed doors with no further input on the National Park's Petition for Declaratory Orders.

That means the Water Commission may rely solely on the information provided by the National Park with no additional input from others.

If you agree with many that the recent National Park's Petition for Declaratory Orders is inappropriate and not warranted, please contact Roy Hardy, acting-deputy of the Water Commission and let him know:

1. you oppose the petition for declaratory orders
2. the suggestion that designation of a part of the aquifer (component part of groundwater basin or at ahupua'a scale) is not consistent with the rules or practice of the Water Commission
3. you strongly request that a hearing be held in Kona to address the petition prior to any Water Commission action with others being given equal opportunity to provide input

Roy Hardy's e-mail is: roy.hardy@hawaii.gov

The following and attached is a review of the National Park's recent Petition for Declaratory Orders and have serious concerns.

On March 25, 2015, the Kaloko-Honokōhau National Historical Park (National Park) submitted a Petition for Declaratory Orders to the Commission on Water Resource Management (Water Commission.)

"(I)n order to more fully explore 'alternative paths of action', the NPS respectfully requests the

Commission issue declaratory orders determining whether the following constitute an 'area' susceptible to designation pursuant to the state water code and the Commission's administrative rules:

1. The basal (coastal freshwater-lens) groundwater system within the Keauhou Aquifer System Area, and;
2. One or more ahupua'a (historic land divisions) within the Keauhou Aquifer System Area, and;
3. Some combination of 1 and 2."

The suggestion that designation might be limited to the basal aquifer, a limited number of ahupua'a or some combination of these raises some serious issues related to the State water management area designation process, the rights of property owners and the County's land use planning process.

The following highlight some of the concerns and issues related to the premise of the Park's petition.

These are further expanded upon in the attached:

- No Evidence that Groundwater Withdrawals Are Negatively Impacting Resources
- National Park Continues to Reference the outdated 1999 USGS (Oki, et al) Mathematical Model
- Designating the Basal Aquifer Does Not Eliminate the National Park's Claims of Harm
- Pumping from Existing Wells Would Have to be Reduced If Ahupua'a Are Designated

The Petition for Declaratory Orders includes a briefing statement that, in part, notes, "the NPS can consider (1) amending its WMA petition to identify a subarea for designation; and (2) proposing a settlement that caps groundwater withdrawals within the subarea at existing rates and includes an automatic trigger for designation if the cap is exceeded."

In a public meeting, a representative of the National Park said "The sustainable yield for the four ahupua'a that the park falls in is 4.8-MGD ... pumping is already just under 80% of sustainable yield for the four ahupua'a that the park falls in. And, in fact, the capacity of those pumps to pump is just under 180% of sustainable yield."

"Now, there is another well that has already been built; the private developer of that well is trying to give it to the County ... Department of Water Supply. It is called the Palani well. The Palani well is supposed to pump 1-MGD directly mauka of the park."

"That would take pumping to just under 100% of sustainable yield of the four ahupua'a that the park falls in (February 12, 2015, Rotary Club of Kona.)

Here is a link to the video of the presentation to the Rotary Club of Kona:
https://www.youtube.com/watch?v=RXdUVjM1Sog

Of course, the National Park's proposal is inconsistent with the nature of aquifers.

Peter T. Young, President

Ho'okuleana LLC
... to take responsibility ...

1539 Kanapu`u Drive
Kailua, Hawai`i 96734

(808) 226-3567 (Cell Phone)
peter.t.young (Skype)

PeterYoung@Hookuleana.com
www.Hookuleana.com

Do well by doing good.

967 4

Save paper, save money - you may not need to print this e-mail.

From: Nicolas Yamasaki
To: roy.hardy@hawaii.gov
Subject: Keauhou Aquifer Concerns
Date: 04/14/2015 12:15 PM

Mr. Hardy,

I am opposed to the Petition for Declaratory Orders that was submitted by the National Park. The proposal to designate only a portion of the aquifer is not consistent with the rules and practices of the Water Commission.

The National Park are using older models and picking the areas adjacent to the Park that has the highest number of wells, just to make the appearance that the Sustainable yield of a "portion" of the aquifer to be higher than the realistic actual values for the entire aquifer.

Lastly, could you please allow the Kona community to have an equal opportunity to provide input, by holding a hearing in Kona prior the Water Commission taking any final actions.

Thanks,
Nicolas Yamasaki

From:	Bud Norwood
Sent By:	buddynorwood@gmail.com
Reply To:	budn@aloha.net
To:	roy.hardy@hawaii.gov
Subject:	NPS Petition
Date:	04/14/2015 01:08 PM

Dear Mr. Hardy,

I am a 5th generation resident of Hawaii. I have lived on the Big Island since 1969. I strongly oppose the NPS petition re the Keauhou aquifer or any part thereof, or any local water resource for that matter. The idea that the NPS can act the bully based on half baked science and have the potential to dictate how the COH manages the natural resources of the Island of Hawaii is repugnant. I urge you and your fellow commissioners of the Water Commission to follow the dictates of your own rules and deny the NPS any say AT ALL as it regards the water resources of the Big Island. Furthermore, any and all hearings re this matter should be public and held in Kona.

Bud Norwood
P.O.Box 1212
Kailua Kona, HI 96745
808-896-0144 cel
808-331-3244 wk

From:	Bo Kahui
To:	roy.hardy@hawaii.gov
Cc:	Peter T Young; Riley Smith; Bo Kahui; Bob Lindsey; Daisy Mitchell; Dora Aio; Greg Ogin; Michael Matsukawa; Sam Walker Sr; Tommy Hickox; Kapua Baker; Karleen Cox; Kauhane Ben Heloca; kca Sam Walker; Mark Aiona; Rudy A'i; Emily Hill; &#39.Bo Kahui&#39.; Charlie Nahale; Kelly Drysdale; Roy; Roy Lambrecht; Walter Kunitake; Aisea Tuikolovatu; Avery Kramer; Bob Fritzgerald; David Bowden; Elaine Watai; Jane Clement; John Kaiwi; Ken Melrose; Leslie Kurisaki; Mo Smith; Randy Morris; Sue Aronson; WHIPAC Austin; Roger Harris; Jon Wallenstrom; Ann Bouslog; Jobie Masagatani; DHHL - Jeff Fujimoto; Kaleo Manuel; Isaac Sylva; Diana Akao; Leeann Crabbe; Lau, Wally; Kenny Van Bergen; Beck, Dora; Leithead-Todd, Bobby Jean; OLT
Subject:	Object to CRWM to convene to discuss NPS petition related to the declatory order
Date:	04/14/2015 01:11 PM

Mr. Hardy,

Recently, I had attended the CWRM Water workshop held in Hilo regarding the Commission duties and understanding of the CWRM regulations and implementation of its policies

Under Water Commission rules, and apparent advice of the Attorney General's office, ***the Water Commission can act behind closed doors*** with no further input by stakeholders on the National Park's Petition for Declaratory Orders.

This means that without others commenting on the NPS petition, the Water Commission may rely solely on the information provided by the National Park and draw its own conclusion.

Therefore, the National Park's Petition for Declaratory Orders is inappropriate and not warranted, for the following reasons;

1. we oppose the petition for declaratory orders
2. the suggestion that designation of a part of the aquifer (component part of groundwater basin or at ahupua'a scale) is not consistent with the rules or practice of the Water Commission
3. we strongly request that a hearing be held in Kona to address the petition prior to any Water Commission action with others being given equal opportunity to provide input

The suggestion that designation might be limited to the basal aquifer, a limited number of ahupua'a or some combination of these raises some serious issues related to the State water management area designation process, the rights of property owners and the County's land use planning process.

The following highlight some of the concerns and issues related to the premise of the Park's petition.

- No Evidence that Groundwater Withdrawals Are Negatively Impacting Resources
- National Park Continues to Reference the outdated 1999 USGS (Oki, et al) Mathematical Model
- Designating the Basal Aquifer Does Not Eliminate the National Park's Claims of Harm
- Pumping from Existing Wells Would Have to be Reduced If Ahupua'a Are Designated

Please contact me if you have any questions. I look forward to the meeting in May 2015

Mahalo Nui
Craig "Bo" Kahui
Executive Director
Laiopua 2020
808-327-1221

From:	Aaron Stene
Reply To:	aaron@hawaii.rr.com
To:	roy.hardy@hawaii.gov; dlnr.cwrm@hawaii.gov
Subject:	Keauhou Aquifer - NPS Petition for Declaratory Order
Date:	04/14/2015 02:09 PM

Dear Mr. Hardy,

The National Park Service's recent petition for declaratory order sounded encouraging and is heading in the right direction. However, I'm concerned only the National Park's input will be used to determine the future of this petition. I hope the community's input will be used also in making a determination on this petition.

I believe the best course of action is holding a public hearing in Kona and allowing the community to comment on this petition.

Sincerely,
Aaron Stene

From: Kris Martin
To: roy.hardy@hawaii.gov
Cc: Norm Stuard
Subject: Request For A Public Hearing For Input On The Keauhou Aquifer
Date: 04/14/2015 03:07 PM

Aloha Mr. Hardy,

On behalf of Norm Stuard, General Manager of Palamanui, LLC, please be advised that Mr. Stuard is opposed to the recent petition for Declaratory Orders by the National Park that would block additional input from others. Furthermore, Mr. Stuard would like you to be cognizant of the fact that the suggestion that the designation of a part of the aquifer, most specifically, the component part of a groundwater basin, or a ahupua`a scale, is not consistent with the rules or practices of the Water Commission. Additionally, he strongly urges that a hearing be held in Kailua-Kona with others, so that they would be given an equal opportunity to provide input prior to any Water Commission action. Mr. Stuard thanks you in advance for your kind consideration.

Best regards,

Kris Martin | **Project Coordinator**
PALAMANUI, LLC
68-1087 Ke Kailani Drive
Kamuela, HI 96743
M: 808.295.8382
Kris.Martin@HuntCompanies.com
Palamanui | www.palamanui.com

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: Please consider the environment before printing this e-mail

From: Nancy E Burns
Sent By: Nancy Burns
Reply To: nebpellc@hawaii.rr.com
To: roy.hardy@hawaii.gov
Subject: NPS Petition for Declaratory Ruling
Date: 04/14/2015 05:27 PM

Dear Mr. Hardy

I am writing to request that the NPS Petition for Declaratory Ruling regarding the Keauhou Aquifer be a public process with input from the community who will be affected by such a ruling. Any decisions regarding the Ruling should be made in a public forum with community input and not behind closed doors.

Thank you,

Nancy

Nancy E. Burns, P.E., LLC
73-1487 Hao Street
Kailua Kona, HI 96740

Phone (808) 325-3182
Fax (808) 325-1065
Cell (808) 960-5896

https://www.hightail.com/u/Nancy-E-Burns

From: Brooke Wilson
To: roy.hardy@hawaii.gov
Subject: Response to NPS petition for declaratory order
Date: 04/16/2015 04:30 PM

Aloha Mr. Hardy,

PRP is a not-for-profit organization that represents the Hawaii Regional Council of Carpenters, the largest construction union in the state, and more than 240 of Hawaii's top contractors. Through this unique partnership, PRP has become an influential voice for responsible construction and an advocate for creating a stronger, more sustainable Hawaii in a way that promotes a vibrant economy, creates jobs and enhances the quality of life for all residents.

We are writing to express our opposition to the recent National Park Service's (NPS) Petition for Declaratory Order. We believe that it is inappropriate, not transparent, and not warranted. The suggestion that designation of a part of the aquifer is not consistent with the rules or practice of the Water Commission. To uphold the integrity of the discussion at hand, we request that a hearing be held in Kona to address the petition prior to any Water Commission action, and that an equal opportunity be given for all experts, stakeholders and individuals to provide input.

PRP stands with dozens of stakeholders, water experts, landowners and community members in opposition to the National Park's petition to designate the Keahou Aquifer. For the last year, our organization has attended numerous Water Roundtable meetings on Hawaii Island intended to start a productive dialogue regarding Hawaii Island's water resources. During this process, the state's top hydrologists and water resource engineers have stated on record that modeling used by the NPS (Oki et al., 1999) is outdated and does not reflect the latest understanding of high elevation aquifers. These experts also went on record to state that the data provided by the NPS "cannot be considered to be accurate."

Thank you for allowing us to express our position on the matter.

Sincerely,
Brooke Wilson
Government Relations Manager, Pacific Resource Partnership

Brooke Wilson
Government Relations Manager

PRP

Pacific Resource Partnership
1100 Alakea Street, 4th Floor

Honolulu, HI 96813
www.prp-hawaii.com

PHONE 808.528.5557
DIRECT 808.380.8838
EMAIL bwilson@prp-hawaii.com

 Become a Fan

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DEPARTMENT OF WATER SUPPLY • COUNTY OF HAWAI'I
345 KEKŪANAŌ'A STREET, SUITE 20 • HILO, HAWAI'I 96720
TELEPHONE (808) 961-8050 • FAX (808) 961-8657

May 18, 2015

Ms. Suzanne D. Case, Chairperson
Department of Land and Natural Resources
State of Hawai'i
ATTENTION: MR. W. ROY HARDY, ACTING DEPUTY DIRECTOR
Commission on Water Resource Management
P.O. Box 621
Honolulu, HI 96809

RE: NATIONAL PARK SERVICE'S PETITION FOR DECLARATORY ORDERS DATED MARCH 20, 2015

Dear Chairperson Case and Members of the Commission,

The Department of Water Supply, County of Hawai'i ("DWS"), wanted to take this opportunity to briefly state its position with respect to the National Park Service's Petition for Declaratory Orders, dated March 20, 2015 (the "Petition"), and to request a hearing on the Petition pursuant to Hawai'i Administrative Rules § 13-167-81(d).

Despite the fact that the State Water Code, Chapter 174C, Hawai'i Revised Statutes ("HRS"), does not define the "geographic area" which could be the subject of a ground water management area, the State Water Code does not contemplate something other than a geographic area which corresponds to a "hydrologic unit" for designation.

The Hawai'i Water Plan, the document that is the guide to satisfying our public trust duties with comprehensive water resource planning, states:

> "The Hawaii water plan shall divide each county into sections which shall each conform as nearly as practicable to a hydrologic unit... Within each hydrologic unit the commission shall establish ... the sustainable yield." *See* HRS § 174C-31(g), (h) and (i).

A "hydrologic unit" is defined as a ground water basin. *See* HRS § 174C-3.

The first criteria for designation in HRS § 174C-44 references "sustainable yield of the proposed ground water management area."

Because an ahupua'a is not connected to any specific hydrologic unit, the Hawai'i Water Plan does not provide for any calculation of a sustainable yield. Additionally, there is no established method to calculate the sustainable yield of something other than a hydrologic unit. Therefore, the code did not contemplate an ahupua'a as a potential ground water management area.

Designating a portion of a hydrologic unit, such as the basal lens of an aquifer, is also not contemplated by the State Water Code. The basal lens is part of a larger complex system of groundwater features within the overall area - it is only a portion of the hydrologic unit.

Prior to ruling on this issue, we hope that the Commission would allow us and the public the full opportunity to further weigh in on this Petition, and that any hearing on this matter be conducted in public. The information that has been filed thus far will not permit a fair and expeditious disposition of the Petition. We believe more information regarding the intent of the Water Code, and the technical impracticality of designating an ahupua'a or basal lens of an aquifer as a ground water management area is needed before a declaratory order is rendered by the Commission. A public hearing will allow the Commission to gather and consider more information necessary for its decision.

Thank you for allowing us to state our position and to request a hearing on the Petition.

Sincerely,

Keith Okamoto
Deputy

KAG/KKO:dmj

copy - Honorable William P. Kenoi, Mayor, County of Hawai'i
Water Board of the County of Hawai'i

From:	Lord, Judith
To:	'Roy.hardy@hawaii.gov'
Cc:	'Katie.c.ersbak@hawaii.gov'; 'jon_jarvis@nps.gov'; 'Tammy_Duchesne@nps.gov'; 'ryan_martel@schatz.senate.gov'; 'jen_burks@hirono.senate.gov'; 'Anthony.ching@mail.house.gov'; 'Rod.Tanonaka@mail.house.gov'; 'kkiser@npca.org'; 'asiegel@npca.org'; Rosenbaum, Robert D.; Johns, Kristen; 'jhh@fmhc-law.com'
Subject:	National Parks Conservation Association
Date:	05/19/2015 02:00 PM
Attachments:	National Parks Conservation Assoc Letter.pdf

Dear Mr. Hardy:

Please find attached a letter from Karen Nardi and Kristen Johns of Arnold & Porter LLP, and Hawaii counsel James Hershey. This letter is submitted on behalf of National Parks Conservation Association regarding Agenda Item C.2 of the Commission on Water Resource Management's May 20th meeting. Thank you for forwarding this letter to the Commission members.

Regards,

Judith Lord
Secretary to Karen Nardi, Arnold & Porter LLP

Judy Lord
Legal Secretary

Arnold & Porter LLP
Three Embarcadero Center, Tenth Floor
San Francisco, CA 94111-4024

Telephone: +1 415.471.3225
Fax: +1 415.471.3400
judy.lord@aporter.com
www.arnoldporter.com

ARNOLD & PORTER LLP

Karen J. Nardi
karen.nardi@aporter.com
415.471.3301

10th Floor
Three Embarcadero Center
San Francisco, CA 94111-4024

May 19, 2015

Via E-Mail

Suzanne Case, Chairperson
Attention: Roy W. Hardy, Acting Deputy Director
Commission on Water Resource Management
P.O. Box 621
Honolulu, Hawai'i 96809

National Parks Conservation Association's Letter In Support of
National Park Service's Offer To Amend Its Petition to Designate a Portion of the
Keauhou Aquifer as a Water Management Area

Dear Chairperson Case:

We write on behalf of the National Parks Conservation Association regarding the National Park Service's ("NPS") Petition to Designate the Keauhou Aquifer as a Water Management Area ("Petition").

As you know, we support the Petition and NPS's efforts to protect the Keauhou Aquifer. As requested by the Water Commission in its December 2014 order, NPS met with the County of Hawai'i and discussed possible approaches to resolving the issues raised in its Petition. The Park Service proposed keeping pumping below 2014 levels, with a contingency for designation of a smaller area of the Keauhou Aquifer if pumping increases above 2014 levels.[1]

NPS has concluded that this pumping regime with a contingency for a partial designation would protect public trust uses and resources in the Kaloko-Honokōhau National Historical Park. It would reduce the aquifer area of concern by over 50 percent. This approach would also alleviate many of the concerns expressed by other

[1] *See* Letter from William P. Kenoi, Mayor, County of Hawai'i & William R. Hansen, Chief, Water Rights Branch, National Park Service, to Chairperson Suzanne Case (April 30, 2015), at 1.

stakeholders. It would maintain operational flexibility for County and State water managers. It would give the development community more certainty and would help avoid delays in redevelopment of the University of Hawai'i Palamanui campus and the Kona Judiciary Complex. And domestic consumption of water by individual users would not trigger designation.

We encourage the Commission to respond favorably to NPS's Petition for Declaratory Orders regarding the agency's ability to designate an area other than a "hydrologic unit" (as defined by the Hawai'i Water Code) as a water management area.[2]

Finally, given the extensive hearings, evidence and testimony in this matter, we recommend that the Commission schedule a vote on the Petition at its June meeting.

Respectfully,

Karen J. Nardi
Kristen Johns
Arnold & Porter LLP

James H. Hershey
Fukunaga Matayoshi Hershey & Ching LLP

On behalf of the National Parks
Conservation Association

Cc: Denise Antolini, Commission on Water Resource Management (via e-mail)
Kamana Beamer, Commission on Water Resource Management (via e-mail)
Michael G. Buck, Commission on Water Resource Management (via e-mail)
Milton D. Pavao, Commission on Water Resource Management (via e-mail)
Jonathan Starr, Commission on Water Resource Management (via e-mail)
Virginia Pressler, Commission on Water Resource Management (via e-mail)
Roy Hardy, Deputy Director, Commission on Water Resource Management (via e-mail)

[2] *See* Letter from Tammy Ann Duchesne, Superintendant, National Park Service, to Chairperson Carty S. Chang (March 25, 2015), at 1.

Katie Ersbak, Staff, Commission on Water Resource Management (via e-mail)
Tammy A. Duchesne, Superintendent, Kaloko-Honokōhau National Historical Park, National Park Service (via e-mail)
Jonathan Jarvis, Director, National Park Service (via e-mail)
United States Senator Brian Schatz (via-email)
United States Senator Mazie Hirono (via e-mail)
United States Representative Tulsi Gabbard (via e-mail)
United States Representative Colleen Hanabusa (via e-mail)
Kari Kiser, National Parks Conservation Association (via e-mail)
Adam J. Siegel, National Parks Conservation Association (via e-mail)
Robert D. Rosenbaum, Arnold & Porter LLP (via e-mail)

From: Marty
To: roy.hardy@hawaii.gov
Subject: Water
Date: 05/19/2015 04:41 PM

I am opposed to **the National Park's Petition for Declaratory Order**

Marty Kimball 937-7149

From: Stathie John Prattas
To: roy.hardy@hawaii.gov
Subject: Testimony for Water Commission Hearing in Kona - Wed., May 20, 2015
Date: 05/19/2015 07:03 PM
Importance: High

Aloha Water Commission Chair Roy Hardy,

The Kona community is opposed to the National Park's petition for Designation.

There are several reasons why the National Park's Petition for Declaratory Orders is inappropriate and not warranted:

- In 1993, CWRM adopted an Aquifer System Area approach to organize and manage ground water resources
- The Water Commission consistently uses the Aquifer System Area in measuring and management of water resources
- The suggestion that designation of a part of the aquifer (component part of groundwater basin or at ahupua'a scale) is not consistent with the rules or practice of the Water Commission
- Recommendation that a hearing be held in Kona to address the petition prior to any Water Commission action with others being given equal opportunity to provide input

- **Petition for designation of the aquifer:**

  - None of the following eight criteria for designation have been met:
    1. Existing pumping is 40% - the law sets a 90% threshold
    2. Mauka wells are properly placed
    3. Mauka wells withdraw from high level aquifer, there is no salt intrusion
    4. No water being wasted - West Hawaii use is consistent with other communities
    5. The Dept of Health has not made any finding that there is actual or threatened water quality degradation
    6. There are no serious disputes (except that the National Park is not willing to see that the science does not support their theory)
    7. Water levels are not declining - in fact, in 2011, the USGS concluded the Keauhou Aquifer recharge estimate should be increased by 77%
    8. No data suggests there is evidence of impacts due to pumping

  * Science is the foundation for designation - there is no scientific evidence that groundwater withdrawals are negatively impacting resources

    > "(N)either the National Park Service, or anyone else's field data has shown a likely impact from use of high level water to supply the Kona residents. ... Contrary to what the National Park suggests, scientific evidence shows that withdrawals of water from the high level aquifer will most likely have a negligible impact on the makai aquifer at the National Park."

  * The National Park continues to reference the outdated 1999 USGS (Oki, et al) mathematical model;

    However, even the model they cite clearly notes its limitations -

"The model used in this study cannot predict the distribution of salinity within the aquifer and is not capable of predicting water quality changes in the Park." Yet, the Park uses it anyway, and that model forms the foundation of their petition." (Oki et al., 1999)

The Resources are NOT at Risk - the National Park's Representatives State There is No Evidence of Negative Impacts due to Pumping

The National Park's own hydrologist, Paula Cutillo, Ph.D. stated, "The water resources in the Park include the coral reefs, two fish ponds and a fish trap, over 185 anchialine pools and wetlands. ... These resources are relatively healthy; we have no evidence that existing pumping has adversely affected these resources." (August 27, 2014, Kona Water Roundtable) This was later confirmed by National Park Superintendent Tammy Duchesne (who submitted the petition,) "We do not have any evidence that pumping wells have adversely affected water resources in the park." (November 15, 2014, e-mail).

Please vote NO on Designation!

Mahalo,

Stathie

Stathie J. Prattas
Kailua-Kona, Hawaii
Cell: 808.895.4187

From:	Allison Aganus
To:	dlnr.cwrm@hawaii.gov; roy.hardy@hawaii.gov
Subject:	Kohanaiki Shores LLC Memorandum to CWRM
Date:	05/20/2015 10:01 AM
Importance:	High
Attachments:	Kohanaiki Shores Memorandum to CWRM re NPS Petition.pdf

Aloha Roy,

Please find attached a letter and supporting documents on the position of Kohanaiki Shores LLC with regards to the petition by National Park Service for Declaratory Orders. Hard copies of this document will also be presented to you at today's hearing. Thank you in advance for your consideration.

Joe Root
President/CEO
Kohanaiki Shores LLC

KOHANAIKI

MAIL P.O. Box 9015, Kailua-Kona, HI 96745
COURIER 73-2055 Ala Kohanaiki
Kailua-Kona, HI 96740
D 808.854.2801 | C 808.557.0042
jroot@kohanaiki.com | kohanaiki.com

May 20, 2015

Via Email: dlnr.cwrm@hawaii.gov; roy.hardy@hawaii.gov

Suzanne Case
Chairperson
Department of Land and Natural Resources
Commission on Water Resource Management
Attention Mr. Roy Hardy, Acting Deputy Director
Kalanimoku Building
1151 Punchbowl Street, Room 227
Honolulu, HI 96813

Dear Chairperson Case and Members of the Commission:

I am writing this letter on behalf of Kohanaiki Shores, LLC, whose project is situated adjacent to Kaloko-Honokahau National Park. At Kohanaiki we are proud of our record of environmental awareness and taking action to protect the environment in the development of our residential and golf course property at Kohanaiki. Kohanaiki is the only golf course in the State of Hawaii to be Silver certified by Audubon International. Kohanaiki manages an extensive anchialine pond restoration and management program, and maintains a comprehensive water quality management program for surface and ground water, ponds, and near-shore waters.

In September 2013, the National Park Service (NPS) petitioned the Commission to designate the Keauhou Aquifer System Area as a ground water management area. Nineteen (19) months after filing the initial petition to have the entire Keauhou Aquifer System Area (**KASA**) designated as a water management area, the NPS adjusted its request and sought declaratory orders from the Commission as to whether only a portion of the KASA could be designated as a water management area. Up until now Kohanaiki has not submitted testimony in response to NPS' efforts to have the KASA designated. As evidenced by our environmental track record, Kohanaiki recognizes the value of having our natural resources preserved and protected at the Park. We also do not wish to create an antagonistic relationship with our neighbors at Kaloko-Honokohau National Park. However, this pending matter raises serious concerns for Kohanaiki. Therefore, we requested a legal opinion as well as a technical review of the pending Declaratory Order matter. Both summaries are attached.
Based on the information included in these reports it is clear to us that NPS' request for a declaratory order allowing the Commission to designate an area smaller than an Aquifer System Area must be denied. We also believe that there are no valid scientific reasons for the Commission to designate the KASA as a management area. Kohanaiki can provide additional information to support that position when the Commission is prepared to deliberate on that matter.

In any event, we believe responsible stewardship by the Kona community along with the County of Hawaii will safeguard the island's future.

Sincerely,

Joseph Root
President/CEO
Kohanaiki Shores LLC

Enc. (2)

CARLSMITH BALL LLP
A LIMITED LIABILITY LAW PARTNERSHIP
P.O. Box 656 Honolulu, Hawaii 96809-0656 Tel: 808.523.2500 Fax: 808.523.0842

Memorandum To: Joe Root, Kohanaiki Shores LLC

From: Steven S.C. Lim

Date: May 19, 2015

Subject: Kohanaiki Shores, LLC - Analysis of the Merits of the National Park Service's Petition for Declaratory Orders, Filed March 25, 2015

You requested that our office provide you with a legal analysis of the merits of the National Park Service's ("**NPS**") Petition for Declaratory Orders filed with the Commission on Water Resource Management ("**Commission**") on March 25, 2015 (the "**Petition**").

I. Introduction

In September 2013, the NPS petitioned the Commission to designate the Keauhou Aquifer System Area ("**KASA**") as a ground water management area. More than 19 months after filing that petition, NPS adjusted its request and sought declaratory orders from the Commission as to whether only a portion of the KASA could be designated as a water management area.[1] The purpose of this memorandum is to address the merits of the NPS' recent claim that the Commission may designate portions of KASA as a water management area, rather than designating the entire hydrologic unit, which in this case is the KASA.

---

[1] We note that this extraordinary delay is contrary to the Hawaii Supreme Court's decision in *Ko'olau Agric. Co., Ltd v Comm'n on Water Res. Mgmt.*, 83 Hawaii 484, 927 P.2d 1367 (1996):

> A three-year period of uncertainty regarding the status and validity of a WMA designation would render the permitting process chaotic; persons would not know whether permits were required, or whether, once obtained, the permits were valid. A three-year wait to achieve finality, after it has been determined that the water resources in an area might be threatened, would conflict with the need to regulate water use and interfere with the State's constitutional obligation to "protect, control, and regulate the use of Hawai'i's water resources for the benefit of its people." Haw. Const. art. XI, sec. 7.

Ko'olau at 495, 927 P.2d at 1378.

II. Brief Statement

NPS filed the Petition under Hawaii Revised Statutes ("**HRS**") § 91-8 and Hawaii Administrative Rules ("**HAR**") § 13-167-81. A petition for declaratory ruling is not the correct procedure for NPS to use here. Therefore, it does not appear that the Commission has jurisdiction to entertain the NPS Petition, and therefore the matter must be dismissed.

In 1993, the Commission adopted an Aquifer System Area approach to organize and manage ground water resources. *See* Comm'n on Water Res. Mgmt., State of Hawaii Dep't of Land & Natural Res., *Boundary Reclassifications Within the Honolulu, Pearl Harbor, and Waialua Ground Water Management Areas Including the Pearl Harbor Caprock Area, Oahu* (March 3, 1993); *see also Hawaii Water Plan, Water Resources Protection Plan* (June 2008). The Aquifer System Area approach is the only method currently recognized by the Commission, articulated in the Commission's rules, and recognized by the Hawaii Supreme Court.

The NPS Petition appears to be an effort to challenge the Commission's use of the Aquifer System Area approach. Therefore, the Petition is not an appropriate matter for consideration under HRS § 91-8. "Because HRS § 91-8 only allows for declaratory rulings as to questions of 'applicability,' an administrative agency has no discretion to issue rulings under this section that do no bear on such questions." *Citizens Against Reckless Dev. v. Zoning Bd. of Appeals of City & Cnty. of Honolulu*, 114 Haw. 184, 200, 159 P.3d 143, 159 (2007). Instead, the appropriate vehicle for NPS' request is a judicial appeal under HRS § 91-7, which provides the mechanism for declaratory judgments regarding the validity of an agency's rules.[2] Alternatively, if NPS disapproves of the Aquifer System Area approach, NPS can petition the Commission to engage in rulemaking under HRS § 174C-8 and HAR § 13-167-41, *et seq*.[3]

---

[2] HRS § 91-7 provides:

> (a) Any interested person may obtain a judicial declaration as to the validity of an agency rule as provided in subsection (b) by bringing an action against the agency in the circuit court [or, if applicable, the environmental court], of the county in which the petitioner resides or has its principal place of business. The action may be maintained whether or not the petitioner has first requested the agency to pass upon the validity of the rule in question.
>
> (b) The court shall declare the rule invalid if it finds that it violates constitutional or statutory provisions, or exceeds the statutory authority of the agency, or was adopted without compliance with statutory rulemaking procedures.

NOTE, bracketed language is effective as of July 1, 2015.

[3] As discussed *infra*, that process is significantly different from the Commission's process for disposing of a request for declaratory ruling.

III. **Factual Background**

In the Petition NPS claims that the term "area" is ambiguous, and that its Petition "underscores the importance of clarifying this term for the purposes of designating a water management area." NPS Petition at 2. NPS asks the Commission to determine whether a water management area can be isolated to something other than an Aquifer System Area. However, research shows that with respect to groundwater, the Aquifer System Area appears to be the only currently acceptable area for designation.

At its meeting on August 28, 2008, the Commission adopted the current Water Resources Protection Plan ("**WRPP**"), which is the Commission's primary contribution to the overall Hawaii Water Plan ("**HWP**"). No component of the HWP can be adopted, approved or modified without the Commission following certain procedures. *See* HRS § 174C-31(p).[4] The HWP guides all of the Commission's decisions with respect to water resource planning. "There is a need for a program of comprehensive water resources planning to address the problems of supply and conservation of water. The Hawaii water plan, with such future amendments, supplements, and additions as may be necessary, is accepted as the guide for developing and implementing this policy." HRS § 174C-2(b).

Prior to formally adopting the WRPP, the Commission made a draft of the WRPP available for public comment on October 1, 2007. The Commission held seven (7) public hearings throughout the State, and solicited public testimony and feedback, including expert feedback, from dozens individuals and organizations, before it finally adopted the WRPP. The WRPP reconfirms the Commission's 1993 decision to adopt the Aquifer System Area approach.

NPS acknowledges in a footnote that the term "hydrologic unit" is defined under the Water Code. However, the thrust of NPS' argument is that the definition is insignificant because the term "primarily appears in Part III - Hawaii Water Plan [and] the focus of that part of the code is on long term planning." NPS Petition at 2, fn 1. NPS appears to unfairly seek to minimize the importance of the term "hydrologic unit" and Part III of the Water Code.

Part III of the Water Code mandates that the Commission prepare the HWP. *See* HRS § 174C-31. The designation of hydrologic units Statewide, and the determination of a sustainable yield for each such unit, are essential determinations that the Commission must make before it can designate any area as a water management area, or issue a water use permit within a designated area. *See* HRS § 174C-31(d)(2).[5]

---

[4] "The commission shall not adopt, approve, or modify any portion of the Hawaii water plan which affects a county or any portion thereof without first holding a public hearing on the matter on the island on which the water resources are located. At least ninety days in advance of such hearing, the commission shall notify the affected county and shall give notice of such hearing by publication within the affected region and statewide." HRS § 174C-31(p).

[5] "(d) The water resource protection plan shall include, but not be limited to: . . . (2) Hydrologic units and their characteristics, including the quantity and quality of available resource, requirements for beneficial instream uses and environmental protection, desirable uses worthy of

In preparing the HWP, the Commission is required to divide each county into sections "which shall each conform as nearly as practicable to a hydrologic unit." Within the context of the hydrologic unit, the Commission is required to describe and inventory:

> (1) All water resources and systems in each hydrologic unit;
>
> (2) All presently exercised uses;
>
> (3) The quantity of water not presently used within that hydrologic unit; and
>
> (4) Potential threats to water resources, both current and future.

HRS §174C-31(h).

The hydrologic unit is the geographic area that may subject to designation as a ground water management area. Within each hydrologic unit the Commission must establish the sustainable yield. HRS § 174C-31(i). The concepts of hydrologic unit and sustainable yield appear to be inseparable. Only once the hydrologic unit is established, and the sustainable yield determined, can the Commission issue water use permits. HRS §174C-31(j).[6]

The importance of the hydrologic unit, which is currently understood to be the Aquifer System Area, is further evidenced by the statutorily required content of the WRPP. The WRPP must include "Hydrologic units and their characteristics, including the quantity and quality of available resource, requirements for beneficial instream uses and environmental protection, desirable uses worthy of preservation by permit, and undesirable uses for which permits may be denied." HRS §174C-31(i).

The Commission's Rules explain that the WRPP must include:

> (1) Designation of hydrologic units statewide and their characteristics.
>
> (2) A master inventory describing the nature and location of water resources in the state by hydrologic units, current water uses statewide, and water quality data as provided by the department of health in the water quality plans.

HAR § 13-170-20.

---

preservation by permit, and undesirable uses for which permits may be denied;" *See* HRS § 174C-31(d)(2).

[6] "The commission shall condition permits under part IV of this chapter [Regulation of Water Use] in such a manner as to protect instream flows and maintain sustainable yields of ground water established under this section."

The integration of the HWP "is dependent on the creation of a master water resource inventory, designation of hydrologic units as identified in section 13-170-20, and formulation of water quality criteria as described in section 13-170-52." HAR §13-170-60(a). The HWP "shall guide the commission in designations of water management areas and in the issuance of permits as set forth in chapter 174C, HRS." *Id.* at (e) (emphasis added). In other words, the hydrologic unit, which is the mandatory tool of measurement under the Water Code, is the criteria by which the Commission can designate ground water management areas and issue water use permits. In 1993 the Commission determined that the Aquifer System Approach is the best means of establishing and analyzing the hydrologic units. The NPS Petition cannot change those facts.

A. **Adoption of Aquifer System Area Approach**

The current WRPP explains the history and rationale of the Commission's adoption of the Aquifer System Approach.

> In 1993, CWRM adopted an Aquifer System Area approach to organize and manage ground water resources. This superceded the previous method of managing aquifers by larger Sector area boundaries. The Aquifer System Area approach allows for better optimization of well placement and is a better indicator of where water is located within a Sector area. It is the simplest method for optimizing development of the island's ground water resources while ensuring long-term sustainability from the planning and regulatory perspective. As a result of the new management approach, some aquifer system areas were subdivided into multiple systems and others were consolidated into single systems. This resulted in significant changes in the distribution of sustainable yields amongst affected aquifer system areas.

WRPP at 3-58.

The current WRPP further explains that the Commission established ground water hydrologic units to provide a consistent basis for managing ground water resources. WRPP at 3-11. These units are described as follows:

> In general, each island is divided into regions that reflect broad hydrogeological similarities while maintaining hydrographic, topographic, and historical boundaries where possible. These divisions are known as Aquifer Sector Areas. Smaller subregions are then delineated within Aquifer Sector Areas based on hydraulic continuity and related characteristics. These sub-regions are called Aquifer System Areas. In general, these units allow for optimized spreading of island-wide pumpage on an aquifer-system-area scale.
>
> It is important to recognize that Aquifer Sector Area and Aquifer System Area boundary lines were based largely on observable surface conditions (i.e. topography, drainage basins and streams,

> and surface geology). In general, only limited subsurface information (i.e. well logs and well cores) is available. Hydrogeologic features and conditions at the surface may not adequately or accurately reflect subsurface conditions that directly affect groundwater flow. As a result, the Aquifer Sector Area and Aquifer System Area boundary lines should be recognized as management lines and not as hydrologic boundaries. Communication of groundwater between Aquifer Sector Areas and between Aquifer System Areas is known to occur.

WRPP at 3-12.

The Commission has decided that the Aquifer System Area approach is the appropriate approach in implementing the HWP and WRPP and for issuing water use permits. An administrative agency's interpretation of its own rules is entitled to "deference unless it is plainly erroneous or inconsistent with the underlying legislative purpose." *International Bhd. of Elec. Workers, Local 1357 v. Hawaiian Tel. Co.*, 68 Haw. 316, 323, 713 P.2d 943, 950 (1986) (citations omitted). If NPS wishes to challenge the Commission's use of the Aquifer System Approach, it may do so under HRS § 91-6 (Petition for adoption, amendment or repeal of rules).

IV. Analysis

The Commission's adoption of the Aquifer System Approach has led to the Commission promulgating rules to provide for reservations of water for the Department of Hawaiian Home Lands ("**DHHL**"). HAR § 13-171-60, adopted October 13, 1993, sets forth the process by which the Commission may reserve water for DHHL. These reservations are by Aquifer System Areas and the aquifer is the understood and legally binding parameter. For example, HAR § 13-171-61 reserves 1.724 million gallons of ground water to DHHL in the Waipahu-Waiawa Aquifer System Area; HAR § 13-171-62 reserves 0.124 million gallons per day of ground water in the Waimanalo Aquifer System Area; under HAR § 13-171-63 the Commission reserved for DHHL 2.905 million gallons per day of ground water from the Kualapuu Aquifer System Area.

The Hawaii Supreme Court has recognized that the hydrologic units and sustainable yield determinations required under the Water Code are denominated in aquifer-specific terms. The Court has correctly pointed out that the Water Code mandates the Commission to formulate the HWP. The Court's interpretation of HAR § 13-170-2(c) is telling:

> HAR § 13-170-2(c) further provides that, "[i]n preparing the Hawai`i water plan[,] each county shall be divided into sections **[(aquifers)]** which shall conform as closely as practicable to hydrologic units" and that "[t]he Plan shall describe and inventory the ... [s]ustainable yield."

In re Waiola O Molokai, Inc. 103 Hawaii 401, 425, 83 P.3d 664, 688 (2004) (upholding the Commission's authority to designate water reservations by specific aquifers) (emphasis added).

If NPS' request is granted, it could upend the functioning of the Water Code and the water use permit process. Among the criteria that the Commission must consider when

presented with a water use permit application is whether the proposed use "can be accommodated within the available water source" *i.e.*, the Aquifer System Area. *See* HRS §174C-49(a)(1); HAR §13-171-13(a)(1). The Commission must also consider whether the proposed use will "interfere with the rights of the department of Hawaiian home lands as provided in section 221 of the Hawaiian Homes Commission Act." HRS §174C-49(a)(7). As explained above, DHHL's reservations have been established by Aquifer System Area. NPS cannot use the declaratory ruling procedures under HRS § 91-8 to change the Commission's rules.

A. **Declaratory Proceedings**

The Hawaii Supreme Court has rejected attempts to use the declaratory ruling procedures under HRS § 91-8 to revisit decisions previously made by an administrative agency. Although framed as a request for declaratory ruling, NPS appears to request that the Commission decide the validity of its rules, *i.e.*, the Commission's adoption and use of the Aquifer System Area approach. It is not clear that the Commission has jurisdiction to entertain this request:

> As both the title ("Declaratory rulings by agencies") and the pertinent text ("a declaratory order as to the applicability [of a statute, agency rule, or order]") make clear, the declaratory ruling procedure of HRS § 91–8 is meant to provide a means of seeking a determination of whether and in what way some statute, agency rule, or order, applies to the factual situation raised by an interested person. It was not intended to allow review of concrete agency decisions for which other means of review are available. Reading HRS § 91-8 in a common sense fashion, and bearing in mind the plain meaning of the term "applicability," it cannot seriously be maintained that the procedure was intended to review already-made agency decisions.

Citizens Against Reckless Dev. v. Zoning Bd. of Appeals of City & Cnty. of Honolulu, 114 Haw. 184, 196-97, 159 P.3d 143, 155-56 (2007).

As stated above, the Commission adopted the Aquifer System Area in 1993. *See* Commission on Water Resource Management, *supra* at 1-3. The decision regarding the Aquifer System Approach was made in 1993 and cannot be revisited under the pending Petition. In this Petition, NPS does not appear to seek a determination on the applicability of the Aquifer System Approach. Rather, NPS appears to be questioning the validity of the Aquifer System Approach under HRS § 91-7. Alternatively, NPS could be asking this Commission adopt, amend or repeal its rules, or to revise the HWP. In either event, a petition for declaratory ruling under HRS § 91-8 is not the correct procedural vehicle for the relief sought by NPS.

B. **Where Rulemaking is Implicated, Substantial Time and Public Involvement is Required**

The process for Commission rulemaking is set forth under HRS § 174C-8 and HAR § 13-167-41, *et seq*. That process involves a great deal of public notice, comment and evaluation.

The Commission's rulemaking process mandates that the public be provided opportunities to offer evidence and submit data and arguments relevant to the rulemaking. The rulemaking process also allows persons the opportunity to file written protests or other comments regarding the proposed rule within 15 days following the close of the public hearing. We note that the Commission's rules on petitions for declaratory rulings do not appear to mandate a hearing prior to decision-making. It is unclear if any open deliberations are required in connection with a petition for declaratory ruling. *See* HRS §§ 174C-9, 91-8, 92-6. This procedure is in sharp contrast with the public notice and hearing procedures that the Commission must follow when it is engaged in rulemaking.

The procedure for disposing of a petition for declaratory ruling is also substantially different from the procedures that the Commission must follow when adopting, modifying or amending the HWP. The Commission's process for adopting or amending the HWP, of which the WRPP is a necessary component, is found in HRS § 174C-31(p), which provides:

> The commission shall not adopt, approve, or modify any portion of the Hawaii water plan which affects a county or any portion thereof without first holding a public hearing on the matter on the island on which the water resources are located. At least ninety days in advance of such hearing, the commission shall notify the affected county and shall give notice of such hearing by publication within the affected region and statewide.

See also HAR § 13-170-4 (Modification of water plan).

Should the Commission wish to modify the WRPP and/or the HWP, it must engage in a detailed public process. NPS' Petition is in effect a challenge to the existing WRPP, and cannot be adjudicated under the declaratory ruling procedures available under HRS § 91-8.

V. Conclusion

The Commission does not appear to have jurisdiction to reconsider the validity of the Aquifer System Approach in the manner requested by NPS. The Water Code and related administrative rules are clear on the process that the Commission must follow when proposing new rules or when modifying the HWP and WRPP.

Nancy E. Burns, P.E., LLC
73-1487 Hao Street
Kailua-Kona, HI 96740
Tel: 325-3182 Fax 325-1065

MEMO

May 18, 2015

To: Mr. Joe Root, President
Kohanaiki Shores, LLC

Subject: National Park Service's Petition for Declaratory Orders

This memo is to provide my views as a civil engineer/hydrologist regarding the National Park Service's Petition for Declaratory Orders and the impact that it may have on water resources that the Kohanaiki resort subdivision depends upon.

The National Park Service (NPS) has inquired whether the Commission on Water Resource Management can declare an area other than a "hydrologic unit" as defined by the State Water Code as a Water Management Area. The Nation Park Service has requested that the basal aquifer and/or one or more ahupua'a within the Keauhou Aquifer System Area be susceptible to designation as a Water Management Area.

According to the CWRM website: *Ground-water hydrologic units have been established by the Commission on Water Resource Management to provide a consistent basis for managing ground water resources. The units are primarily determined by subsurface conditions. In general, each island is divided into regions that reflect broad hydrogeological similarities while maintaining hydrographic, topographic, and historical boundaries where possible. Smaller sub-regions are then delineated based on hydraulic continuity and related characteristics. In general, these units allow for optimized spreading of island-wide pumpage on an aquifer-system-area scale.*

The NPS's request for segmentation of established hydrological units is contradictory to the Commission's duty to provide safe and reliable water resources for the needs of the people of Hawaii. Hydrologic Units as currently designated allow for management of water resources within regions and allow for redundancy in order to assure water availability to all within the region should a well or other portion of a water system need repair or replacement.

Allowing segmentation of hydrologic units so that some portions of the aquifer system are removed from the overall hydrological unit currently supplying water to a region will negatively impact the ability of the Department of Water Supply to provide safe and reliable water for the needs of the community.

The NPS's petition for segmentation appears to be an attempt to stop development of lands in the vicinity of the Park and it appears that if the Commission on Water Resource Management grants the request for segmentation the NPS will attempt to stop the use of all water currently used or planned to be used within the ahupua'a surrounding the National Park. The NPS has claimed that any pumping within these lands will negatively impact the ecosystems within the Park. It is my understanding that if an area is designated as a Water Management Area, all existing uses of water will need to be evaluated and such uses may be denied or severely limited. Please note that the National Park Service has claimed that any additional water use within the Keauhou Aquifer will negatively impact the ecosystems within the Park even though they have no scientific data or evidence to support their claim. Thus far they have been seeking to stop or severely limit water use and development within the Keauhou Aquifer based exclusively on the "precautionary principle".

Although the NPS has no scientific evidence that use of groundwater resources within the basal and high level aquifers in and around the Park will negatively impact the Park's ecosystems, scientific evidence is available which demonstrates that there have been no impacts to the Park's ecosystems due to pumping of the aquifer within the Kohanaiki development which is immediately adjacent to the Kaloko-Honokohau National Historical Park. Kohanaiki's brackish well system is currently permitted to pump up to 1.5 million gallons a day of brackish water for use on the golf course and project landscaping. The brackish water is pumped to a reverse osmosis plant where the water is freshened and used for irrigation. The National Park Service protested the use of water from the aquifer claiming that it would have detrimental impacts to ecosystems within the Park. In response to this claim the Commission on Water Resource Management, the County of Hawaii, and Kohanaiki in cooperation with the National Park Service developed a strict ground water monitoring program which included drilling additional monitoring wells and frequent data collection and analyses. Kohanaiki has faithfully conducted the agreed upon water quality monitoring program and the resulting scientific analysis has shown that the use of the brackish water within the Kohanaiki project has not impacted the National Park Service's ecosystems.

The Kohanaiki project has been using brackish water for irrigation for many years and has often pumped at the maximum allowable rate for grow-in of the golf course and landscaped areas. Extensive water quality sampling from monitoring wells located within the property and along the border with the Kaloko-Honokohau National Historical Park shows that there has been no impact to the groundwater. In fact, it has been demonstrated that using fresh water for irrigation can actually mitigate increases in salinity that the National Park Service has theorized will result from natural causes.

I have followed the National Park Service's petition very closely and am of the opinion that the National Park Service does not have a working knowledge of the hydrology/hydraulics of the Keauhou Aquifer nor do they understand the intricacies of supplying safe and reliable water to the Keauhou Aquifer region. They have ignored the results of the extensive scientific data from

the water quality monitoring program that they themselves insisted upon in order to make informed management decisions and instead have chosen to ask the Water Commission to designate a Water Management Area based solely upon "precautionary principle". It is my understanding that "precautionary principle" is to be considered only when there is an absence of scientific data. In the case of the Keauhou Aquifer there is an abundance of scientific data supporting the fact that withdrawals from the high level aquifer and the basal lens are not impacting the Park and there is no evidence that continued withdrawal from the aquifer will harm the Park's ecosystems. The Commission on Water Resource Management has taken great care to evaluate the safe yield of the aquifer and to put in place monitoring measures that will give early warning of any changes in water characteristics within the Park. The water quality monitoring plan that has been put in place at the insistence of the National Park Service includes provisions for mitigation of any impacts due to ground water use. It seems now that the monitoring plan that the Park insisted on has shown no impact to Park resources that monitoring plan is no longer acceptable to them. The Park has stated publicly that if a Water Management Area is designated, they are mandated to attempt to stop all pumping whether or not such pumping is actually impacting Park resources.

The National Park Service has taken a simplistic view of ground water resources and has leapt to the conclusion that any additional pumping of the aquifer in and around the Kaloko-Honokohau National Historic Park will be detrimental to the ecosystems within the Park without any data to back up this conclusion. In fact, data and analysis of the Park's ecosystems and resources show that there has been no negative impact to the Park despite the fact that there are numerous wells in close proximity to the Park.

As a civil engineer/hydrologist who lives in the Kaloko area and has developed water systems within the Keauhou Aquifer for the past 20 years, I am of the opinion that the National Park Service's petition to designate the Keauhou Aquifer is not warranted. The Park Service is now attempting to segment the aquifer in the mistaken belief that any additional withdrawal of water within lands close to the Park will harm the ecosystems within the Park. I believe that sufficient protections are in place via the existing extensive ground water, surface water, ocean water, and marine life monitoring programs to prevent any damage to the Park. I also believe that there is an abundance of scientific evidence and data to support the assumption that pumping up to the safe yield will have no significant impact on Park resources. Contrary to what the Park has been asserting, pumping from the high level aquifer may actually be beneficial to their near shore resources that depend on the brackish water lens. The use of high level water for irrigation and other domestic uses will allow fresh water that otherwise would have passed below the Park's shallow ground water to contribute to the shallow brackish layer of water thus freshening the water and counteracting increases in salinity due to global warming and sea level rise.

There is no valid reason to designate the Keauhou Aquifer or any portion of the Keauhou Aquifer as a Water Management Area at this time. None of the criteria for designation have been met. There is no scientific data to support designation but there is scientific evidence to

show that some pumping may actually be beneficial to the Park's resources. Since the Park does not acknowledge that some pumping could be beneficial and have stated that they will protest any additional water withdrawal, a Water Management Area which allows the National Park Service to prevent water withdrawal may actually be detrimental to the Park's resources.

As a civil engineer/hydrologist I would recommend that monitoring of ground water continue and that mitigation measures be put in place should negative impacts be detected. Based on all of the testimony to date it is apparent that most state and local experts agree that this is the best course of action to assure that safe and reliable sources of water and healthy ecosystems are available for future generations.

Submitted by,
Nancy E. Burns, P.E., LLC

Nancy E Burns

Nancy E. Burns, P.E.

From: Riley Smith
To: Suzanne Case (suzanne.case@hawaii.gov)
Cc: W. Roy Hardy, P.E. (roy.hardy@hawaii.gov); Katie Ersbak - STATE - DLNR, CWRM (katie.c.ersbak@hawaii.gov)
Subject: Testimony to CWRM at Meeting in Kona, 5/20/15; on Keauhou aquifer
Date: 05/20/2015 09:23 PM
Attachments: CWRM Testimony Riley Smith - Lanihau Properties with attachment 052015.pdf
CWRM Testimony Riley Smith - Lanihau Properties with attachment 052015.pdf

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Chair Case....Here's my testimony that I provided at today's meeting. Please share with all Commissioners, including the attachment that is included, especially Commissioner Virginia Pressler who was not at today's meeting.
Let me know if you have any questions.
Riley Smith, P.E.

Riley Smith, P.E.
President/Chief Executive Officer
Lanihau Properties, LLC
(808) 936-7129

Lanihau Properties, LLC

P.O. Box 9032
Kailua-Kona, HI 96745
Phone: (808) 936-7129 • Fax: (808) 329-8044
Email: rsmith@lanihau.net

May 20, 2015

Suzanne Case, Chair
Department of Land and Natural Resources
1151 Punchbowl Street
Honolulu, HI 96813
Via email: Suzanne.case@hawaii.gov

Re: Opposition to the Petition to Designate the Keauhou aquifer as a Water Management Area

Chair Case and members of the Commission on Water Resource Management. Welcome to Hawaii island and thank you for making the effort to discuss this matter with us. I am Riley Smith, President of Lanihau Properties. I am a native Hawaiian and a graduate of the Kamehameha Schools. I am the beneficiary of an alii trust and know what *kuleana* is. I know what it means to *malama our aina*. As the CEO for the combined family enterprise that includes Palani Ranch, we have been stewards of our *mauka* watershed lands in North Kona since the 1850s and used to own the entire *ahupuaa* of *Honokohau*, which included the portion that was sold to the federal government for the *Kaloko Honokohau* National Park. Our management of these mauka 10,000 acres above the National Park, helps to control runoff and manage siltation which helps to protect the near shore waters, but also assists with groundwater recharge of the Keauhou aquifer.

The petition and declaratory motion that has been filed is without merit. There is no imminent, nor pending harm to the Keauhou aquifer. If the petitioner had any evidence that would support their petition, they would have provided it to you. When you asked them questions about the limiting threshold of constituents in their anchialine ponds, they were evasive in their responses. Instead, they cite the precautionary principle and behave as if the sky is falling. Their own hydro-geologist (Dr. Paula Cutillo) states that there is no impact to the aquifer. Her quote (8/27/14 Kona Water Roundtable meeting) states, "The water resources in the Park include the coral reefs, two fish ponds and a fish trap, over 185 anchialine pools and wetlands.....These resources are relatively healthy, we have no evidence that existing pumping has adversely affected these resources." Their Superintendent, Tammy Duchesne, stated that "We do not have any evidence that pumping wells has adversely affected water resources in the Park" (email of 11/14/15). Their public statements contradict their petition and declaratory motion.

Their legal counsel testified that the National Park Service does not intervene on every matter that comes before them. However, the attached article from Pahrump Valley Times (dated 10/15/14), contradict his statements saying, "I've had people say NPS stands for National Protest Service, and granted that's sometimes how it appears to some people; The Park Service is just filing protest after protest" Fahmy told the gathering of numerous scientists. He also went on to say, "....that's all water

rights owners do is file protests, because that's what's necessary if you have water rights. That's a valuable asset. You have a fiduciary duty to protect that asset and if that means filing five, 10, 15, 20 protests a month, you do it".

Since your meeting of December 10, 2014, they have witnessed the community opposition to their petition and are now seeking to designate a portion of an aquifer. Your rules do not allow for this type of "limited designation".

The County embarked on the Kona Community Development plan in 2007. The National Park Service was asked to participate. Their Superintendent, Geri Bell participated in the process. This multi-year planning process included input from all segments of the community, including the NPS. Now they are asking the Commission to put our planning process on hold and not allow the urban core to be implemented, as adopted by the County Council and Mayor's office. This is not fair.

Please do the right thing, listen to the people of Kona and allow our community to thrive and prosper by denying the petition and declaratory motion.

Very truly yours,

Riley W. Smith, P.E.
President/Chief Executive Officer

Attachment:

Pahrump Valley Times, dated October 15, 2014 "Park Service attorney defends Amargosa water rights protests"

Cc: Roy Hardy, Deputy Director (Acting), CWRM: roy.hardy@hawaii.gov:
Katie Ersbak, Katie.c.ersbak@hawaii.gov, please provide copies to all Commissioners

Pahrump Valley Times
Nye County's Largest Newspaper Circulation
Wednesday, October 15, 2014 CURRENT WEATHER: Clear, 95°

May 13, 2009

Park service attorney defends Amargosa water rights protests

By MARK WAITE
PVT

FURNACE CREEK, Calif. -- Water Rights Attorney Peter Fahmy's name usually appears on the protests of water rights applications filed in Amargosa Valley that are protested by the National Park Service.

MARK WAITE / PVT
Attorney Peter Fahmy speaks to delegates about order No. 1197.

Fahmy, who works for the National Park Service, vehemently defended the protests, designed to protect the Devil's Hole pupfish and springs, at Death Valley National Park, during a speech at the annual Devil's Hole workshop at the Furnace Creek Visitors Center last week.

"I've had people say NPS stands for National Protest Service, and granted that's sometimes how it appears to some people: 'The Park Service is just filing protest after protest,'" Fahmy told the gathering of numerous scientists.

"But I can tell you, I come from Colorado, which has some of the most complicated, involved water administration systems in the United States, and having worked as a water adjudicator, that's all water rights owners do is file protests, because that's what's necessary if you have water rights. That's a valuable asset. You have a fiduciary duty to protect that asset and if that means filing five, 10, 15, 20 protests a month, you do it."

Fahmy called Devil's Hole, a 400-foot-deep cavern where pupfish inhabit a shelf just below the surface, "one of the most valuable assets in the National Park Service."

He called state engineer's order No. 1197 a wonderful model other states should adopt. It outlines how states can work together with federal agencies to protect federal water rights.

Deputy State Engineer Bob Coache told the delegates, "Any applications in Amargosa Valley -- mountain top to mountain top -- are going to be denied outright."

Coache added the exclusion of applications for two acre feet of water per year or less -- roughly the amount of water four families of five would use in a year -- means a businessman who wants to open up a pizza joint or a bar in Amargosa Valley can do so as there would be no additional impact to the basin and it allows some economic development.

Coache said he's received a lot of questions about how they designated the 25-mile radius around Devil's Hole cited in the state engineer's order.

"It was nothing more than a line. All we wanted to do was get past the irrigation areas of Amargosa and we wanted something very simple in the order that somebody could pick the order up, draw on a map and see if they were in the area or not," Coache said.

A federal court ruling determined the water level in Devil's Hole must be 2.7 feet below a copper washer, Coache said.

"Until recently the water level declined in Devil's Hole," Coache continued. "There's been an upward tick, but who knows why, and it's definitely in the best interest of all stakeholders -- all water right holders in Amargosa, the state, the national park, all these entities -- to keep the water level within the allocation of the depth of water above the washer."

Fahmy said the state engineer acted within his statutory authority when he issued order No. 1197. The water resources of the state of Nevada belong to the people of Nevada, he said.

"This has been confirmed numerous times in decisions in the state of Nevada. The state engineer has wide latitude to decide what's in the public interest," Fahmy said.

The U.S. government is debating whether to participate in supporting the state engineer of his ruling in order No. 1197, Fahmy said. Under federal law, he said the state engineer doesn't have jurisdiction over federal water rights.

The interesting thing, Fahmy said, is the order doesn't address the California side.

During his parting comments at the conference, outgoing Death Valley National Park Superintendent J.T. Reynolds told the crowd, "I just hope we fought the good fight because water is definitely the battleground and everybody wants some of it.

"I think what's important for us is to make sure the usage we have to work with is sustainable, and knowing that there will be development in the desert, we're not going to stop that, but I hope that we're sane about our use and eliminate the abuse that we had in the past. I hope we're all partners in ensuring the use of water in the desert in a sustainable way."

JAMES S. GREENWELL
74-4865 Mamalahoa Highway
Kailua-Kona, HI 96740

May 20, 2015
Suzanne Case, Chair
Department of Land and Natural Resources
1151 Punchbowl Street
Honolulu. HI 96813

RE: Opposition to the Petition to Designate the Keauhou Aquifer as a Water Management Area

Chair Case and members of the Commission on Water Resource Management. Welcome back to Kona and thank you for being here today for this update and continuing dialogue that is so critical to the future of our community.

My connection to this matter is that my great grandfather acquired the ownership responsibilities to the lands of Honokohau 1 and 2 in the late 1800's. Our family business through Lanihau Properties and Palani Ranch Company have been close to and worked on and with these lands ever since - with the exception of the lands the federal government acquired for the park. We understand and have always cared about our neighborhood, the resources that are our kuleana to manage, and our neighbors and we have always endeavored to work out any differences patiently and equitably.

I last testified on this matter on December 10 and my position has not changed. I believe that designation of our aquifer – or for that matter any portion of our aquifer – would be very premature, lack scientific justification, and would be an inappropriate exercise of the authority and fundamental purpose of your Commission. So why am I to testify again?

First, it is because I wanted to thank you for keeping the venue of these key meetings in Kona where all of us who are stakeholders can stay abreast of the process. I hope all future meetings on this agenda item can also be scheduled in Kona.

I also wanted to thank the Commission for its wisdom in December to be patient with any decision making and to instead call upon the Park Service and Water Department to huddle and work more closely together rather than depend on the regulatory solution sought by the Park Service. I came today, like you, to hear how that process has progressed.

It is also because the Commission has a new Chair who we welcome to the discussion who is here in part to meet the stakeholders and hear from them directly as to their level of interest and the substance of their position.

And lastly I have a fiduciary responsibility to my family owners of Lanihau Properties and Palani Ranch as one of the more senior members to stay involved in this discussion until resolved.

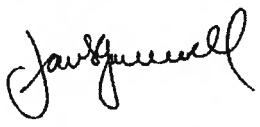
Let's continue to be patient so any new players have a fair chance to get up to speed.

Let's encourage continued direct dialogue between NPS and the Water Department if that is making headway.

Let's stay focused on the science, the eight criteria for designation, and past precedence set by your Commission.

On that last point, I am puzzled with the proposal of designating only a portion of an aquifer. To me that seems like trying to protect the water in a glass that is being sipped through two straws by only regulating the use of one of the straws?? I think this logic is flawed.

Thank you for this opportunity to testify.



James S. Greenwell

Queen
Lili'uokalani
Trust

`E `ONIPA`A KAKOU
Let us all be steadfast.

19 May 2015

Suzanne Case, Chairperson
Commission on Water Resource Management
Department of Land and Natural Resources
1151 Punchbowl Street, Room 227
Honolulu, Hawaii 96813

Re: **Testimony in OPPOSITION to the Petition for Declaratory Orders Dated March 20, 2015 and Petition to Designate the Keauhou Aquifer System as a Ground Water Management Area**

Chair Case and Members of the Commission on Water Resource Management,

The Queen Lili'uokalani Trust would like to humbly submit this testimony in **opposition** to (1) the petition for declaratory orders and (2) the petition to designate the Keauhou aquifer as a ground water management area.

The Trust has submitted testimony **opposing** the National Park Service's (NPS) previously submitted petition to designate the Keauhou Aquifer System Area as a Water Management Area (WMA) for reasons of:

- NO scientific data to support State Water Management designation,
- None of the criteria for designation have been met,
- There are NO impacts on Hawaiian cultural practices,
- Unwarranted State water designation would be yet another instance of the federal government interfering with home rule, and
- Designation would effectively prevent realization of the community's vision for smart growth in the region.

The Trust deeply holds firm to these reasons.

The NPS has now filed for declaratory orders that it may instead amend its current petition or file a new petition seeking WMA designation of (1) the basal groundwater system in the Keauhou Aquifer System Area or (2) one or more ahupua`a within Keauhou Aquifer System Area or (3) some combination of both. The Trust is **opposed** to this for the following reasons listed below:

- Commission on Water Resource Management adopted an Aquifer System Area approach to organize and manage ground water resources in 1993,
- The Water Commission consistently uses the Aquifer System Area in measuring and management of water resources,
- The suggestion that designation of a portion of the Keauhou aquifer is not consistent with the rules or practice of the Water Commission,
- The Trust strongly requests that a hearing be held in Kona to address the petition prior to any Water Commission action with others being given equal opportunity to provide input.

Queen
Lili'uokalani
Trust

`E `ONIPA`A KAKOU
Let us all be steadfast.

The Queen remains a guiding spirit, *ka lama o ka no'eau*, for those of us who strive to fulfill her mandate to mange and grow Trust assets to ensure that our work for Native Hawaiian orphan and destitute children continues in perpetuity. In this second century of providing service to the Queen's beneficiaries, her vision, ideals and values remain strong and empowering. *E 'onipa'a kākou!*

Mahalo for your consideration.

'O wau nō me ka ha'aha'a,

Mana Purdy
Natural Resources Manager

Cc: Suzanne Case, Chairperson, CWRM
Roy Hardy, Manager, CWRM
Katie Ersbak, Assistant

May 20, 2015

Suzanne D. Case
Chairperson
Department of Land and Natural Resources
Commission on Water and Resource Management
P.O. Box 621
Honolulu, Hawaii 96809

RE: **Designation of the Keauhou Aquifer System Area, Kona, Hawaii as a Designated Ground Water Management Area**

Dear Chair Case:

Pacific Resource Partnership (PRP) is a not-for-profit organization that represents the Hawaii Regional Council of Carpenters, the largest construction union in the state, and more than 240 of Hawaii's top contractors. Through this unique partnership, PRP has become an influential voice for responsible construction and an advocate for creating a stronger, more sustainable Hawaii in a way that promotes a vibrant economy, creates jobs and enhances the quality of life for all residents.

We oppose the petition for declaratory orders as well as the petition for designation of the Keauhou Aquifer for the following reasons:

- The National Park has not provided any scientific research to validate its claims of impact on the ponds or on Hawaiian cultural practices. Hawaii State law requires designation of a State Water Management Area must be "reasonably determined" "after conducting scientific investigations and research."

- For the past 25-years, millions of gallons per day have been pumped from fresh and brackish wells above and around the park. Today, the water resources at the park are in good condition and are not impaired. It should also be noted that withdrawing water from mauka wells in neighboring projects - Kukio, Hualalai and Mauna Lani - has not harmed their anchialine ponds, fish ponds or nearshore waters.

- The Keauhou Aquifer is not in trouble. The quantity and quality of water are both good. In the year 2025, with Kona's expected growth factored in, it is projected that only about 22% of the total available water will be used. 78% of the available water will still remain in the Keauhou Aquifer. West Hawaii's natural and cultural resources are not at risk - neither now nor in the foreseeable future at the National Park.

PRP
PACIFIC RESOURCE PARTNERSHIP

There is an abundance of water today and well into the future and thus, we respectfully request the petition for declaratory orders as well as the petition for designation of the Keauhou Aquifer be denied.

Sincerely,

Brooke Wilson
Government Relations Manager

HAWAII LEEWARD PLANNING CONFERENCE
P.O. BOX 2159 • KAMUELA, HAWAII 96743-2159

May 19, 2015

Suzanne Case, Chairperson
Commission on Water Resource Management
Department of Land and Natural Resources
State of Hawaii
1151 Punchbowl Street, Room 227
Honolulu, Hawaii 96813

Re: NPS Petition for Declaratory Orders Dated March 20, 2015; Petition to Designate Keauhou Aquifer System as Ground Water Management Area

Dear Chairperson Case and Members of the Commission:

My name is Jacqui Hoover and I have the privilege of serving as President of Hawaii Leeward Planning Conference ("HLPC"), a member-based 501(c)3 incorporated in 1974 whose members are committed to working with government and private sector stakeholders to advocate for sound planning decisions for West Hawaii to promote the long-term benefits for the communities involved.

The National Park Service ("NPS") previously submitted a petition to designate the Keauhou Aquifer System Area ("KASA") as a Water Management Area ("WMA"). NPS now seeks a declaratory ruling that it may instead amend its current petition or file a new petition seeking WMA designation of (1) the basal groundwater system in the KASA or (2) one or more ahupua`a within KASA or (3) some combination of both.

At the outset, the subject petition raises serious questions which need to be analyzed in light of the current regulatory framework for the management of water resources, before the Commission considers the petition:

- NPS's request appears to seek to combine what should be done in at least two (2) steps into one (1). By seeking to designate less than the entire Keauhou Aquifer as a WMA, NPS is, in essence, asking that the aquifer boundaries be redrawn. Shouldn't that request be processed through an amendment to the Water Resources Protection Plan? Only when that first step is accomplished would the issue of designation of the re-drawn aquifer as a GWMA be properly before the Commission.

Jacqui L. Hoover
President
P.O. Box 2159
Kamuela, Hawaii 96743
Tel: 808.885.9588
Fax: 808.885.9590
info@hawaiileewardplanning.org
www.hawaiileewardplanning.org

- To our knowledge, to date, aquifer boundaries have been modified only when there is persuasive hydrologic information to indicate that there is a significant amount of separation between water bodies or significant hydrologic data indicating that a geographic area overlies a different aquifer. If aquifer boundaries are not determined based on hydrologic separation, what management criteria would the Commission use for redrawing aquifer boundaries?

- If the NPS petition for declaratory ruling is not asking for a modification of aquifer boundaries, but a designation of a portion of a single hydrologic unit, what criteria would the Commission use for designation of a portion of the aquifer? Would the area designated have some hydrologic or other scientific basis. If not based on hydrology, how would Sustainable Yield ("SY") for that portion be determined?

- If only a portion of a single aquifer (based on hydrologic data) is designated as a WMA, what would be the practical challenges in management of the WMA. E.g., if several wells are constructed immediately outside the boundaries of the WMA, would CWRM be comfortable that the SY of the WMA is not affected?

For the reasons stated below, the subject petition for declaratory ruling should be denied. Neither Chapter 174C nor the Commission's rules allow for such designation, and the Commission's practice, together with related Water Resource Protection Plan and Water Use Development elements, are intended to manage water resources utilizing the appropriate hydrologic unit and not some arbitrary portion thereof.

The shift in direction by NPS to seek designation of the basal groundwater, one or more ahupua`a within the KASA, or some combination thereof as a WMA is also without justification. The NPS assertion that existing or proposed groundwater withdrawals threaten cultural and natural resources that are essential to the park's mission remains unsupported. A review of proposed findings provided by CWRM staff in relation to the pending NPS petition rebuts this assertion, and NPS has yet to provide the information requested of it by the Commission in its December 29, 2014 Preliminary Order as to the quantity of groundwater needed to support natural resources and cultural resources. Furthermore, the other criteria for designation haves not been met whether or not the request is for the entire KASA or a portion thereof.

Chapter 174C-31 establishes the overall foundation for the Hawaii Water Plan and the subsequent management tools including the designation of WMAs and establishment of the regulatory process contained in Part IV of the Code. This foundation is predicated on the identification of hydrologic units as the basis for identification of water resources as well as the regulation of uses in order to maintain sustainable yield of ground water.

More specifically, §174C-31(d)(2) requires that the Water Resource Protection Plan include:

> (2) hydrologic units and their characteristics, including the quantity and quality of available resource, requirements for beneficial instream uses and environmental protection, desirable uses worthy of preservation by permit, and undesirable uses for which permits may be denied;

§174C-31(h) further emphasizes the hydrologic unit as the basis for the understanding and management of the water resources when it requires that the Hawaii water plan shall divide each county into sections which shall each conform as nearly as practicable to a hydrologic unit. In further reliance on the hydrologic unit as the basis of water management §174C-31(i) requires the Commission to establish the *sustainable yield* for each hydrologic unit.

Additionally, the Commission's ability to manage uses through permit conditions under Part IV of the Water code is specifically related to the establishment of hydrologic units and the maintenance of *its sustainable yield* (§174C-31(j)).

Based on this comprehensive system for managing an area's water resources, unless and until the proposed geographic area resource (basal ground water) are identified as a hydrologic unit and the Commission has established the Sustainable Yield, the regulatory provisions of Part IV of the Water Code are not applicable, and the intent and purpose of the water management framework would be frustrated.

As for whether one or more ahupua`a contained within KASA may be designated, the definitions do not cover historic land divisions, but rather a geographic area requiring management of a definitive ground water body. The suggested approach of using historical land divisions is not consistent with this standard, absent a correlative analysis of a definite ground water body located within such an area, which NPS has not presented.

Furthermore, even if NPS can provide such a correlative analysis, as noted above, until the Water Resource Protection Plan is revised to include such an area as a hydrologic unit and the Commission establishes the Sustainable Yield, such an area cannot be regulated as a WMA.

The Regulatory System in Place has been Interpreted by the Commission to Require That Water Resource Protection Involve Already Established Hydrologic Units as the Proper Scale for Managing Ground Water Resources

Under HAR 13-170, Subchapter 2, the Commission has already designated the hydrologic units, including KASA, which are included in its water resource protection plan, for purposes of conserving and augmenting the state's water resources. Under HAR 13-170, Subchapter 3, the counties are required to prepare water use and development plans consistent with the water resource protection plan, and as such, in its Preliminary Order dated December 29, 2014 (Docket No. HA-WMA 2013-1), the County of Hawaii was requested to submit a revised project description for proposed amendments to its WUDP consistent with discussions related to KASA, i.e., a defined hydrologic unit.

The Commission's own interpretation of its regulations is entitled to deference and great weight when not plainly erroneous or inconsistent with the underlying legislative purpose. *Kaleikini v. Yoshioka*, 128 Haw. 53, 283 P.3d 60 (2012); *Diamond v. Board of Land and Natural Resources*, 112 Haw. 161, 145 P.3d 704 (2006).

Under HRS Section 174C-31 (d)(1), the water resource protection plan is to include hydrologic units and their characteristics, including the quantity and quality of available resources, requirements for beneficial instream uses and environmental protection, desirable uses worthy of preservation by permit, and undesirable uses for which permits may be denied. Thereafter, each county is to prepare a water use and development plan based on the hydrologic unit. HRS Section 174C-31(d).

The Water Resource and Protection Plan (3.1.2. Applying the "Systems" Approach to Water Resource Management) notes:

> The WRPP encourages effective ground and surface water management through the application of a hydrologic unit systems approach that focuses on the interaction and feedback that occurs between ground and surface water systems and management decisions."

The WRPP defines the basis for Aquifer Coding and Hydrologic Unit delineation (3.3.3.2. Basis for Ground Water Hydrologic Unit Delineations:)

> "In general, each island is divided into regions that reflect broad hydrogeological similarities while maintaining hydrographic, topographic, and historical boundaries where possible. These divisions are known as Aquifer Sector Areas. Smaller subregions are then delineated within Aquifer Sector Areas based on hydraulic continuity and related characteristics. These sub-regions are called Aquifer System Areas. In general, these units allow for optimized spreading of island-wide pumpage on an aquifer-system-area scale ... the Aquifer Sector Area and Aquifer System Area boundary lines should be recognized as management lines and not as hydrologic boundaries."

The Commission has also promulgated rules consistent with the legislative purpose when water resource protection and water use development plans are prepared:

> §13-170-2 (c). In preparing the Hawaii water plan each county shall be divided into sections which shall conform as closely as practicable to hydrologic units. The plan shall describe and inventory the following information within each designated hydrologic unit:
>
> 1. All water resources and water systems.
> 2. All present uses.
> 3. Sustainable yield. (The sustainable yield shall be determined using the best available information and shall be reviewed periodically. Where appropriate the sustainable yield may be determined to reflect seasonal variation.)
> 4. Potential threats to water resources.
> 5. Instream use and protection program for the surface watercourses in the area.
>
> §13-170-2 (d). Respective portions of the water resource protection plan, water quality plan, state water projects plan, and the water use and development plans of each county, shall be developed together to achieve maximum coordination and consistency. The development of the Hawaii water plan or any portion thereof shall proceed in coordination with and with attention to the Hawaii state plan described in Chapter 226, HRS.

Suzanne Case, Chairperson
Commission on Water Resource Management
Department of Land and Natural Resources
State of Hawaii
May 19, 2015

The Water Rules related to Water Use Permits (for designated water management areas) limit those eligible to object (§13-171-19 Evaluation period) to those with 'land within the hydrological unit."

> "(e) In acting upon any application, the commission need consider only those objections filed by a person who has some property interest in any land within the hydrologic unit from which the water sought by the applicant is to be drawn or who will be directly and immediately affected by the water use proposed in the application. The commission shall adopt rules governing the filing of objections and the persons having standing to file objections. [Eff. MAY 27, 1988] (Auth: HRS §174C-8) (Imp: HRS §§174C-5, 174C-50, 174C-52, 174C-53)"

The hydrologic unit model adopted by the Commission more properly views water management from a comprehensive perspective other than the NPS' restricted view that does not account for the interrelationship of water systems that comprise the Keauhou aquifer system. The NPS suggestion that the entire basal water system in the Keauhou Aquifer system could be designated ignores the fact that this system is a part of the hydrologic unit which comprises the Keauhou Aquifer System Area. Designation of the basal water in the entire system also fails to address the dynamics of what comprises the bodies of basal water within KASA, in relation to the sources of such water affecting the NPS boundaries.

In sum, the statutes, rules, resource protection plans and water use and development plans are based upon the hydrologic units developed by the Commission. Procedures related to water use permits are also tied to such units. Private and public interests, including regulating agencies and members of the public are geared towards management of such hydrologic units. Until and unless the statute and rules relating to designation of water management areas are amended, and the hydrologic unit or aquifer system approach is revised, petitions such as that filed by NPS should be denied. To otherwise interpret the rules as NPS requests would constitute impermissible and ad-hoc rule making, in this instance, in a manner which placates the interests of NPS, whose resources have not been established to be at risk under current management systems.

HLPC believes that the petition for declaratory ruling should be denied, or at a minimum, public and agency input sought prior to rendering a decision on the petition to allow questions and issues raised by the subject petition to be analyzed.

Mahalo for this opportunity to speak on this subject.

National Park Service
U.S. Department of the Interior

Kaloko-Honokōhau
National Historical Park

73-4786 Kanalani Street # 14
Kailua-Kona, Hawai'i 96740

808 329-6881 Phone
808 329-2597 Fax

Kaloko-Honokōhau

May 20, 2015

Commission on Water Resource Management
West Hawaii Civic Center
Kailua-Kona, Hawaii

Testimony on Agenda Item C.2

Dear Chairwoman Case:

Thank you for the opportunity to provide testimony today. My name is Tammy Duchesne and I am the Superintendent of Kaloko-Honokōhau National Historical Park. As you are aware, the NPS filed a petition to designate the Keauhou aquifer as a water management area over a year and a half ago. I would like to briefly summarize the actions that the National Park Service (NPS) has taken since the December, 2014, Preliminary Order was issued by the Commission regarding this matter.

The NPS submitted extensive comments on the Commission's Preliminary Findings of Fact by the January 30, 2015, deadline. We met with the County of Hawaii and Commission staff on March 3rd and on March 31st of this year to discuss alternative paths of action, as requested by the Commission. On March 25, 2015, we requested that the Commission issue a Declaratory Order to clarify whether an area other than a hydrologic unit can be designated a water management area. The NPS also offered draft settlement concepts to the County of Hawaii and Commission staff on March 26, 2015.

The Commission's Preliminary Order also requested additional information regarding both the quantity of water needed to support natural and cultural resources in the park, and the traditional and customary practices exercised in the park and how they are managed. We are working on these tasks.

We would like to reiterate our request that the Commission and its staff finalize the Preliminary Findings of Fact and continue the designation process by holding a public hearing on this matter. If the Commission choses to delay a decision on continuing the process, we respectfully reiterate our request for the Commission to direct its staff to defer approval of pump installation permits in the Keauhou aquifer until a decision is made on the designation process.

Thank you for considering actions to protect water-dependent public trust resources in the area of the park. I would like to now introduce Peter Fahmy, Dr. Paula Cutillo, and Dr. Jonathan Scheuer, who will provide more detail on the issues I summarized in my testimony.

DEPARTMENT OF WATER SUPPLY • COUNTY OF HAWAI`I
345 KEKŪANAŌ`A STREET, SUITE 20 • HILO, HAWAI`I 96720
TELEPHONE (808) 961-8050 • FAX (808) 961-8657

May 20, 2015

Ms. Suzanne D. Case, Chairperson and Commissioners
Department of Land and Natural Resources
State of Hawai'i
Commission on Water Resource Management

RE: TESTIMONY REGARDING ITEM C.2. KEAUHOU AQUIFER SYSTEM AREA

Aloha Chairperson Case and Members of the Commission,

My name is Keith Okamoto and I am the Deputy of the Department of Water Supply, County of Hawaii.

On behalf of the Department of Water Supply, County of Hawaii and the Water Board of the County of Hawaii, I would like to reiterate for the record, that we are opposed to the designation of the Keauhou Aquifer System as a whole or any portion thereof as a ground water management area.

Also, regarding the petition for declaratory orders, dated March 20, 2015, filed by the National Park Service, we request that a public hearing be held. Attached for your information and use, is a letter that we submitted on Monday stating our position on said petition.

Mahalo.

DEPARTMENT OF WATER SUPPLY • COUNTY OF HAWAI'I
345 KEKŪANAŌ'A STREET, SUITE 20 • HILO, HAWAI'I 96720
TELEPHONE (808) 961-8050 • FAX (808) 961-8657

May 18, 2015

Ms. Suzanne D. Case, Chairperson
Department of Land and Natural Resources
State of Hawai'i
ATTENTION: MR. W. ROY HARDY, ACTING DEPUTY DIRECTOR
Commission on Water Resource Management
P.O. Box 621
Honolulu, HI 96809

RE: NATIONAL PARK SERVICE'S PETITION FOR DECLARATORY ORDERS DATED MARCH 20, 2015

Dear Chairperson Case and Members of the Commission,

The Department of Water Supply, County of Hawai'i ("DWS"), wanted to take this opportunity to briefly state its position with respect to the National Park Service's Petition for Declaratory Orders, dated March 20, 2015 (the "Petition"), and to request a hearing on the Petition pursuant to Hawai'i Administrative Rules § 13-167-81(d).

Despite the fact that the State Water Code, Chapter 174C, Hawai'i Revised Statutes ("HRS"), does not define the "geographic area" which could be the subject of a ground water management area, the State Water Code does not contemplate something other than a geographic area which corresponds to a "hydrologic unit" for designation.

The Hawai'i Water Plan, the document that is the guide to satisfying our public trust duties with comprehensive water resource planning, states:

> "The Hawaii water plan shall divide each county into sections which shall each conform as nearly as practicable to a hydrologic unit... Within each hydrologic unit the commission shall establish ... the sustainable yield." *See* HRS § 174C-31(g), (h) and (i).

A "hydrologic unit" is defined as a ground water basin. *See* HRS § 174C-3.

The first criteria for designation in HRS § 174C-44 references "sustainable yield of the proposed ground water management area."

Because an ahupua'a is not connected to any specific hydrologic unit, the Hawai'i Water Plan does not provide for any calculation of a sustainable yield. Additionally, there is no established method to calculate the sustainable yield of something other than a hydrologic unit. Therefore, the code did not contemplate an ahupua'a as a potential ground water management area.

Designating a portion of a hydrologic unit, such as the basal lens of an aquifer, is also not contemplated by the State Water Code. The basal lens is part of a larger complex system of groundwater features within the overall area - it is only a portion of the hydrologic unit.

Prior to ruling on this issue, we hope that the Commission would allow us and the public the full opportunity to further weigh in on this Petition, and that any hearing on this matter be conducted in public. The information that has been filed thus far will not permit a fair and expeditious disposition of the Petition. We believe more information regarding the intent of the Water Code, and the technical impracticality of designating an ahupua'a or basal lens of an aquifer as a ground water management area is needed before a declaratory order is rendered by the Commission. A public hearing will allow the Commission to gather and consider more information necessary for its decision.

Thank you for allowing us to state our position and to request a hearing on the Petition.

Sincerely,

Keith Okamoto
Deputy

KAG/KKO:dmj

copy - Honorable William P. Kenoi, Mayor, County of Hawai'i
Water Board of the County of Hawai'i

Current Water Management Units
Ground and Surface Water Boundaries
Keauhou Example

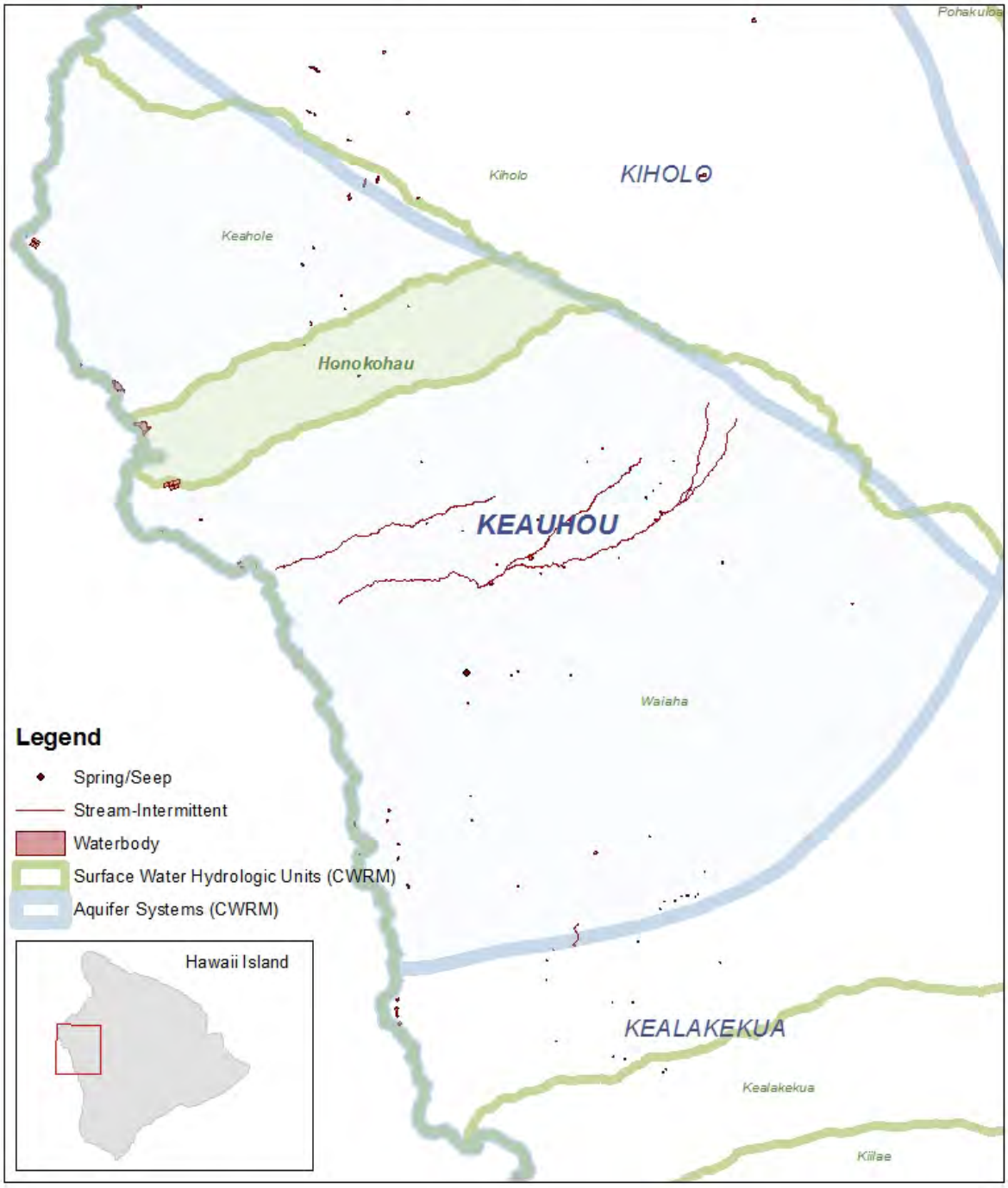


Exhibit 5a

Current CWRM Groundwater Water Management Units
with Ahupuaa
Keauhou Example

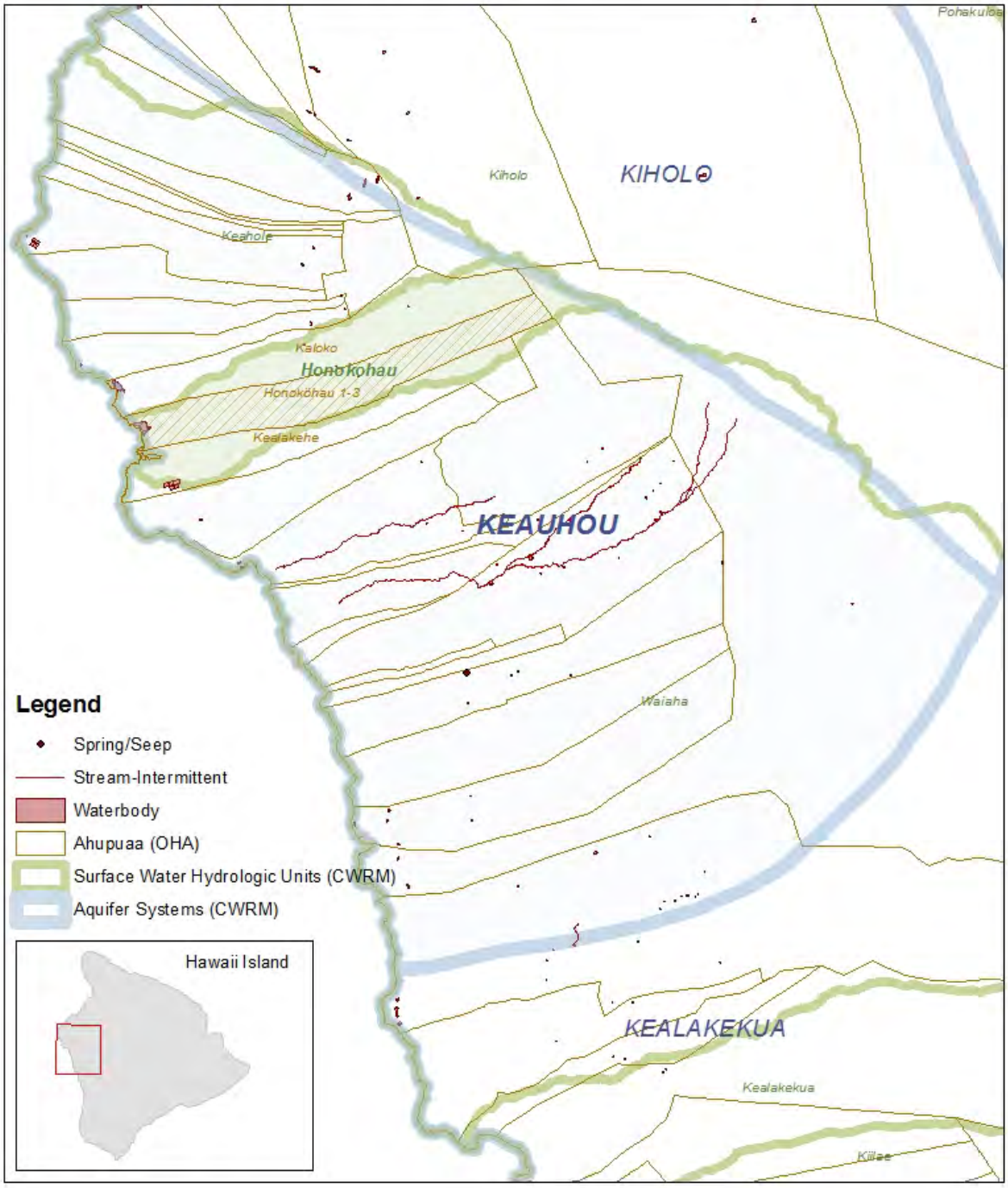
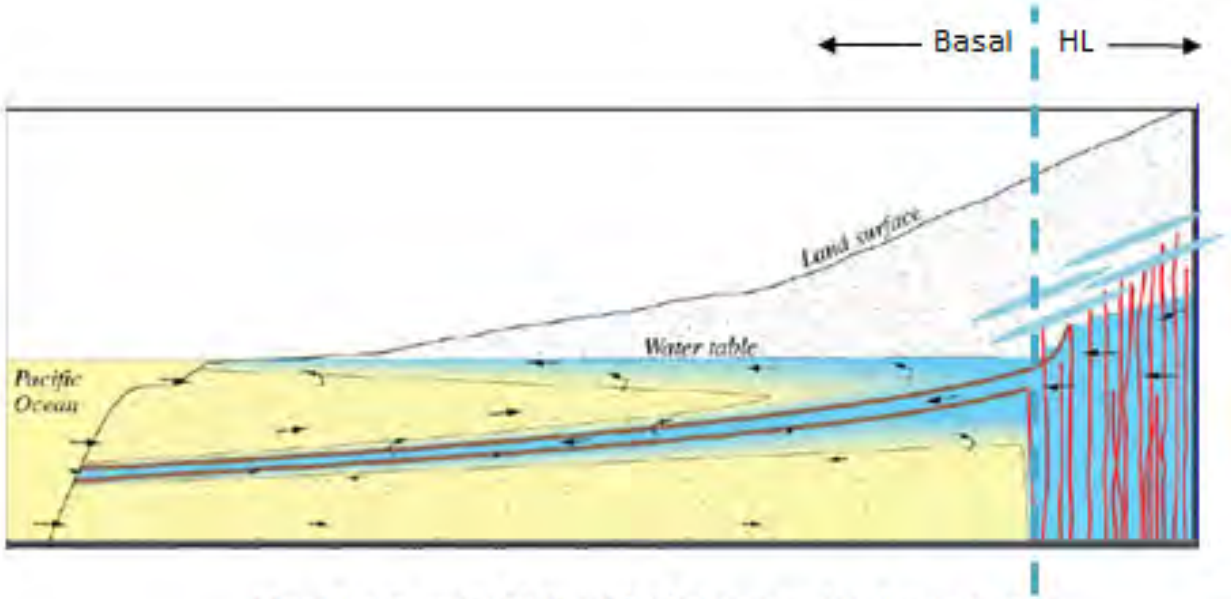


Exhibit 5b


KIHOLO
KEAUHOU
KEALAKEKUA
Aquifer-system boundary
Aquifer-system boundary
Kaloko-Honokohau National Historical Park
4667-01, Kaupulehu 3
4658-01, Kaupulehu 1
4658-02, Kaupulehu 2
4656-01, Kaupulehu 6
4656-02, Kaupulehu 7
4657-03, Kaupulehu 5
4657-02, Kaupulehu 4
4650-01, Puu Waawaa
4556-02, Huehue Ranch 5
4556-01, Huehue Ranch 3
4559-01, Huehue Ranch 1
4459-02, Huehue Ranch 4
4459-01, Huehue Ranch 2
4458-01, Nansay Kohanaiki 1
4458-02, DWS Kohanaiki 2
4360-01, DLNR Kalaoa
4358-01, DWS Kalaoa A
4259-03, DWS Hualalai
4160-02, Kaloko Irr 2
4160-01, Kaloko Irr 1
4158-03, Palani 1
4158-02, DWS Honokohau
4060-01, Quarry
4059-01, DLNR Palani (sealed)
Kona Kai Ola 2
3959-01, Kamakana well
4057-01, DWS QLT
3957-02, USGS Komo
3957-01, Haseko Keopu
3957-05, State Keopu
3957-04, Daufer Coffee 1
3858-01, CWRM Keopu DM
3857-01, DWS Waiaha (sealed)
3857-04, DWS Waiaha
3859-01, McCaskill
3758-01, DWS Kailua-Kona
3759-01, Kaneyoshi Irr
3657-01, DWS Holualoa
3657-02, DWS Pahoehoe
3558-01, Keauhou Robertson
3557-05, DWS Kahaluu Sh
3557-01 to -04, DWS Kahaluu A-D
3457-04, CWRM Kahaluu DM
3457-01, Kona CC Keauhou 1
3457-03, Kona CC Keauhou 3
3457-02, Keauhou A
3456-01, Keauhou B
3357-01, Kona CC Keauhou 2
3355-03, Keauhou Kam 4
3355-01, Keauhou Kam 2
3355-02, Keauhou Kam 3
3357-04, Kona CC Keauhou
3257-01, Honalo Kai
3255-01, USGS Kainaliu
3255-02, State Kainaliu
3153-02, Hokukano Ranch 2
3157-01, Hokulia Hokukano Mon 1
3155-01, USGS Kealakekua
3156-01, Hokukano 2
3155-03, Hokukano 3
3056-01, Hokukano 1
3153-01, Hokukano Ranch
3155-02, DWS Haleki
3054-01, Kalukalu
3057-01, Hokulia Hokukano Mon 2
2955-01, Napoopoo
2755-01, Napoopoo
2753-03, DWS Keei D
2753-01, DWS Keei A
2753-02, DWS Keei B
2653-01, DWS Keei C
2554-01, KS Honaunau S Kona
EXPLANATION
4360-01, DLNR Kalaoa Well (water level <40 feet), number, and name
2753-03, DWS Keei D Well (water level >40 feet), number, and name
0 1 2 3 4 5 MILES
0 2 4 6 8 KILOMETERS

Exhibit 6



Modified from USGS Oki, 9/14/14 Isotope Briefing to CWRM
by adding perched aquifers over high-level and basal aquifers

Exhibit 7

Current CWRM Water Management Units
with Multiple Surface Unit References
Keauhou Example

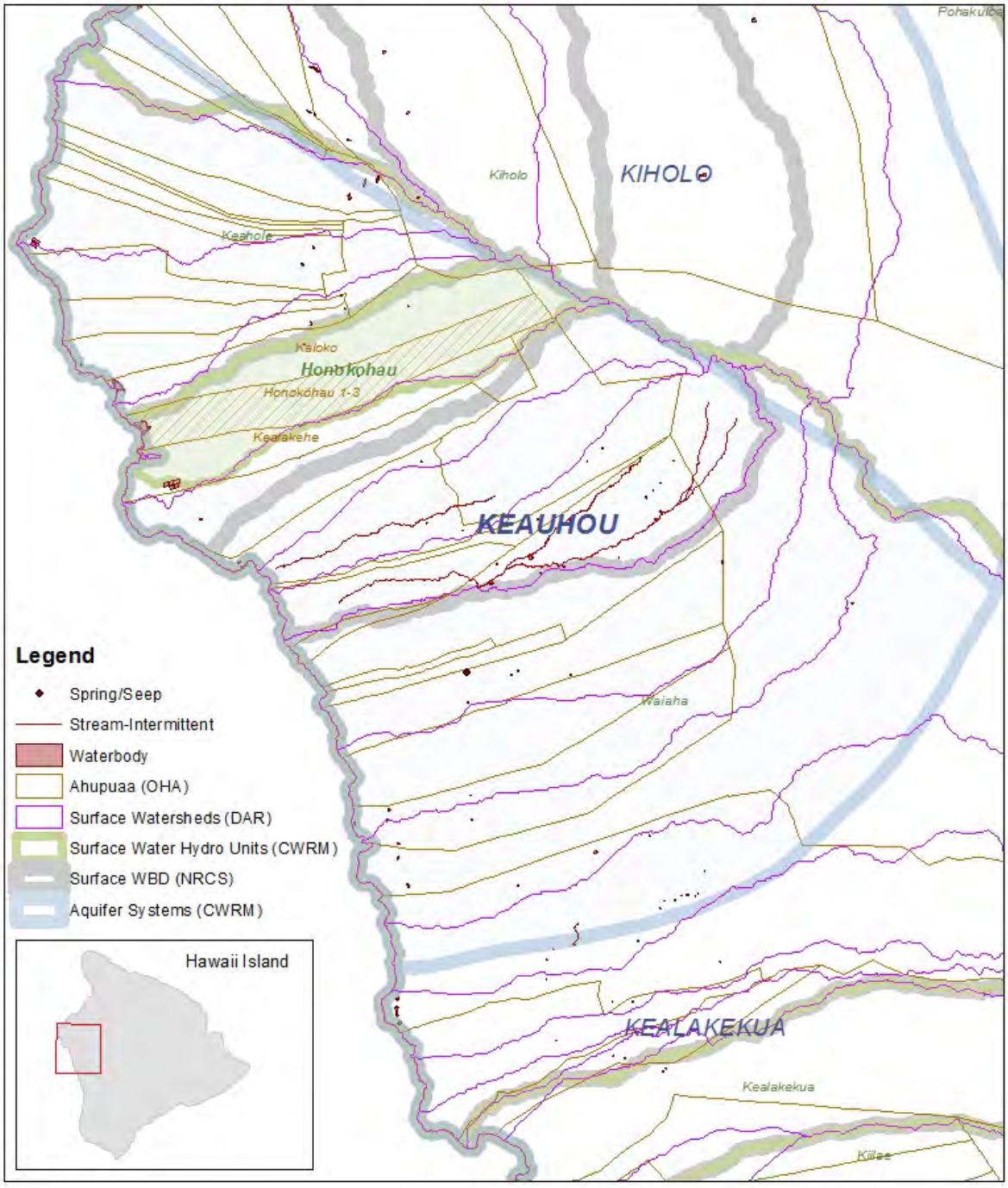


Exhibit 8

Current CWRM Groundwater Water Management Units
with Hillshade
Keauhou Example

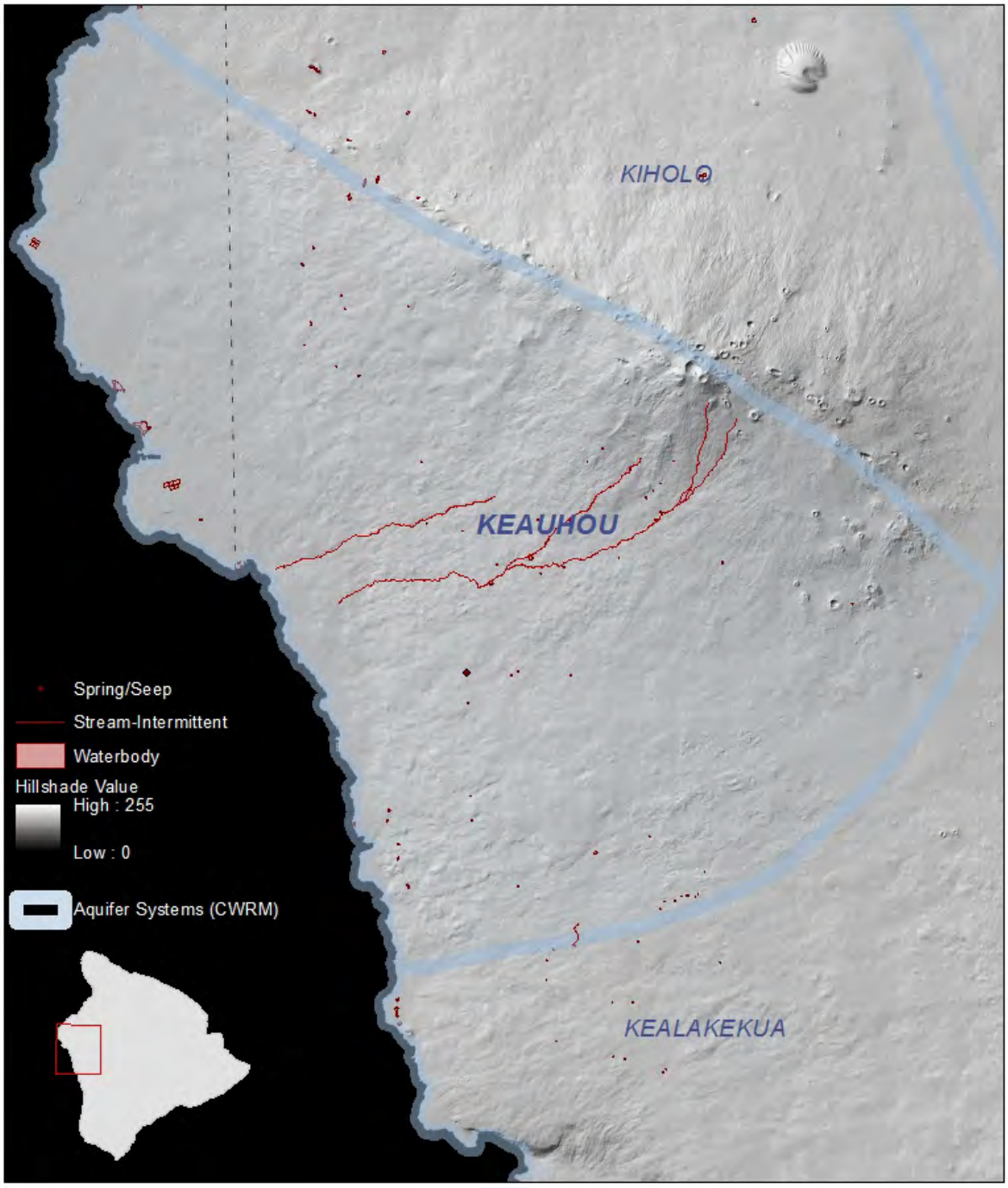


Exhibit 9

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P.O. BOX 621
HONOLULU, HAWAII 96809

June 23, 2015

Honorable William P. Kenoi, Mayor
Office of the Mayor
County of Hawaii
25 Aupuni Street
Hilo, HI 96720

Mr. William R. Hansen, Chief
Water Resources Division - Water Rights Branch
National Park Service
1201 Oakridge Drive, Suite 250
Fort Collins, CO 80525

Dear Mayor Kenoi and Mr. Hansen:

Preliminary Order HA-WMA 2013-1, C.5. - Continuing Negotiations for Alternatives to the Keauhou Aquifer System Area (KASA) Designation

Thank you for your joint response letter dated April 30, 2015 and the discussions at the Commission's May 20, 2015 meeting in Kona regarding your negotiations towards alternatives to the KASA designation. We understand the negotiations have been productive, healthy, and are heading in a positive direction for the benefit of the Kaloko-Honokōhau National Historical Park (Park).

Continuing along this positive direction, the Commission requested that we provide some additional guidance for your consideration as negotiations continue. Based on your letter response and discussions at the May 20, 2015 meeting, we ask that the negotiations continue to explore mutually agreeable solutions including the following:

- Quantification of the Parks water needs as requested in Preliminary Order WMA 2013-1, item C.3. No change from current conditions is an unsatisfactory response.
- Timely development of a regional Water Use and Development Plan that shows how the County will meet existing and future demands without negatively impacting the Park's water resources (e.g., strategies for conservation, developing high-level water in the southern half of the aquifer system area, developing the deep freshwater aquifer, etc.).
- Formulation of a hydrological and biological monitoring plan that identifies reasonable triggers as an advance warning system to prevent negative impacts to the Park due to increasing pumpage near the park.
- Existing authorities for restricting or directing the locations of private well drilling near the Park.
- Update the draft settlement concepts clarifying mutually agreeable alternative actions.
- The application of Coastal Zone Management (CZM) / Special Management Area (SMA) programs to address or manage National Park Service concerns in the immediate vicinity of the Park.

EXHIBIT 10

- Opportunities for artificial enhancement (i.e., R1 reuse, desalting/injection wells, importation of irrigation water into the area, development and use of deep freshwater aquifer, etc.) can be used to mitigate future pumpage impacts to the Park.
- Enhancement of the Park's water resources and traditional and customary practices through regular coordinated county and Park clean-up activities such as the removal of invasive plant and animal species based on Park maintenance or restoration plans and community input.

We look forward to your next meeting to address Preliminary Order WMA 2013-1, item C.5.and hope that you both find our suggestions above worthy of discussion. If you have any questions, please feel free to call Roy Hardy, Acting Deputy Director, at 808-587-0274.

Sincerely,

SUZANNE D. CASE
Chairperson

RH:ss